

**CASE**

**NUMBER:**

99 - 399

INDEX FOR CASE: 99-399  
GRAYSON COUNTY WATER DISTRICT  
Construct, Finance; 278.023

IN THE MATTER OF THE APPLICATION OF GRAYSON COUNTY WATER DISTRICT, GRAYSON COUNTY, KENTUCKY, (1) FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AUTHORIZING CONSTRUCTION OF MAJOR ADDITIONS AND IMPROVEMENTS TO ITS WATER DISTRIBUTION SYSTEM AND (2) SEEKING APPROVAL OF THE ISSUANCE OF CERTAIN SECURITIES

SEQ NBR	ENTRY DATE	REMARKS
0001	09/24/99	Application.
0002	09/29/99	Acknowledgement letter.
0003	10/15/99	No def. letter
0004	10/21/99	FINAL ORDER; GRANTS CONSTRUCTION; AUTHORIZES FINANCING



COMMONWEALTH OF KENTUCKY  
**PUBLIC SERVICE COMMISSION**

730 SCHENKEL LANE  
POST OFFICE BOX 615  
FRANKFORT, KY. 40602  
(502) 564-3940

CERTIFICATE OF SERVICE

RE: Case No. 99-399  
GRAYSON COUNTY WATER DISTRICT

I, Stephanie Bell, Secretary of the Public Service Commission, hereby certify that the enclosed attested copy of the Commission's Order in the above case was served upon the following by U.S. Mail on October 21, 1999.

Parties of Record:

Gerald Hayes  
Manager  
Grayson County Water District  
1113 S. Lee Street  
Leitchfield, KY. 42754

Honorable Robert D. Meredith  
Counsel for the District  
100 East White Oak  
Leitchfield, KY. 42754

Honorable William W. Davis  
Bond Counsel for the District  
Harper, Ferguson & Davis  
1730 Meidinger Tower  
Louisville, KY. 40202

*Stephanie Bell*

Secretary of the Commission

SB/sa  
Enclosure

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF GRAYSON COUNTY )  
WATER DISTRICT, GRAYSON COUNTY, )  
KENTUCKY, (1) FOR A CERTIFICATE OF PUBLIC )  
CONVENIENCE AND NECESSITY AUTHORIZING ) CASE NO. 99-399  
CONSTRUCTION OF MAJOR ADDITIONS AND )  
IMPROVEMENTS TO ITS WATER DISTRIBUTION )  
SYSTEM AND (2) SEEKING APPROVAL OF THE )  
ISSUANCE OF CERTAIN SECURITIES )

O R D E R

On September 24, 1999, Grayson County Water District ("Grayson District") submitted an application for a Certificate of Public Convenience and Necessity to construct a \$2,050,000 waterworks improvement project and for approval of its plan of financing for this project. This project will provide new service to 222 additional customers. Project funding is a \$1,000,000 bond issue to be purchased pursuant to an agreement with the U.S. Department of Agriculture's Rural Development ("RD"), a \$500,000 grant from the RD, a \$500,000 Kentucky State Surplus Grant, and a \$50,000 contribution from the Applicant.

Grayson District's application was made pursuant to KRS 278.023, which requires the Commission to accept agreements between water utilities and the U. S. Department of Agriculture or the U. S. Department of Housing and Urban Development and to issue the necessary orders to implement the terms of such agreements within 30 days of satisfactory completion of the minimum filing requirements. Given that minimum filing

requirements were met in this case on September 24, 1999, KRS 278.023 does not grant the Commission any discretionary authority to modify or reject any portion of this agreement.

IT IS THEREFORE ORDERED that:

1. Grayson District is hereby granted a Certificate of Public Convenience and Necessity for the proposed construction project.

2. Grayson District's proposed plan of financing with RD is accepted.

3. Grayson District is authorized to issue bonds not to exceed \$1,000,000.

4. Grayson District shall file a copy of the "as-built" drawings and a certified statement that the construction has been satisfactorily completed in accordance with the contract plans and specifications within 60 days of the substantial completion of the construction certificated herein.

5. Three years from the effective date of this Order Grayson District shall file an income statement, along with any pro forma adjustments, in sufficient detail to demonstrate that the rates approved herein are sufficient to meet its operating expenses and annual debt service requirements.

Nothing contained herein shall be deemed a warranty of the Commonwealth of Kentucky, or any agency thereof, of the financing herein accepted.





COMMONWEALTH OF KENTUCKY  
**PUBLIC SERVICE COMMISSION**

730 SCHENKEL LANE  
POST OFFICE BOX 615  
FRANKFORT, KY. 40602  
(502) 564-3940

October 15, 1999

Gerald Hayes  
Manager  
Grayson County Water District  
1113 S. Lee Street  
Leitchfield, KY. 42754

Honorable Robert D. Meredith  
Counsel for the District  
100 East White Oak  
Leitchfield, KY. 42754

Honorable William W. Davis  
Bond Counsel for the District  
Harper, Ferguson & Davis  
1730 Meidinger Tower  
Louisville, KY. 40202

RE: Case No. 99-399  
GRAYSON COUNTY WATER DISTRICT

The Commission staff has reviewed your application in the above case and finds that it meets the minimum filing requirements. Enclosed please find a stamped filed copy of the first page of your filing. This case has been docketed and will be processed as expeditiously as possible.

If you need further assistance, please contact my staff at 502/564-3940.

Sincerely,

*Stephanie Bell*

Stephanie Bell  
Secretary of the Commission

SB/sa  
Enclosure

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

**FILED**

**RECEIVED**  
SEP 24 1999  
PUBLIC SERVICE  
COMMISSION

In the Matter of

SEP 24 1999  
PUBLIC SERVICE  
COMMISSION

THE APPLICATION OF GRAYSON COUNTY WATER DISTRICT, GRAYSON COUNTY, KENTUCKY FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AUTHORIZING CONSTRUCTION OF MAJOR ADDITIONS AND IMPROVEMENTS TO ITS WATER DISTRIBUTION SYSTEM AND (2) SEEKING APPROVAL OF THE ISSUANCE OF CERTAIN SECURITIES. )  
)  
)  
) CASE NO. 99-389  
)  
)

The Applicant, Grayson County Water District, situated in Grayson County, Kentucky (the "District"), acting by and through its Commission, respectfully tenders this Application and requests that the Public Service Commission of Kentucky enter its Order pursuant to KRS 278.023 and 807 KAR 5:069 issuing a Certificate of Public Convenience and Necessity authorizing the District to construct major additions and improvements to its public water system (the "System") for the purpose of furnishing an adequate supply of pure and potable water for domestic, agricultural and commercial use in the District and approving the issuance of certain securities by the District. In support of this Application and in conformity with the rules of the Public Service Commission, the District states as follows:

1. The District was established by an Order entered by the County Court of Grayson County, Kentucky, on October 25, 1971, upon petition of the requisite number of freeholders of the area involved and after notice and public hearing in the manner set forth in KRS 74.010.

The District is now, and has been since its inception, regulated by the Public Service Commission of Kentucky, and all records and proceedings of the Public Service Commission with reference to the District are incorporated in this Application by reference.



COMMONWEALTH OF KENTUCKY  
**PUBLIC SERVICE COMMISSION**  
730 SCHENKEL LANE  
POST OFFICE BOX 615  
FRANKFORT, KY. 40602  
(502) 564-3940

September 29, 1999

Gerald Hayes  
Manager  
Grayson County Water District  
1113 S. Lee Street  
Leitchfield, KY. 42754

Honorable Robert D. Meredith  
Counsel for the District  
100 East White Oak  
Leitchfield, KY. 42754

Honorable William W. Davis  
Bond Counsel for the District  
Harper, Ferguson & Davis  
1730 Meidinger Tower  
Louisville, KY. 40202

RE: Case No. 99-399  
GRAYSON COUNTY WATER DISTRICT  
(Construct, Finance; 278.023)

This letter is to acknowledge receipt of initial application in the above case. The application was date-stamped received September 24, 1999 and has been assigned Case No. 99-399. In all future correspondence or filings in connection with this case, please reference the above case number.

If you need further assistance, please contact my staff at 502/564-3940.

Sincerely,  
*Stephanie Bell*

Stephanie Bell  
Secretary of the Commission

SB/jc

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

FILED

RECEIVED  
SEP 24 1999  
PUBLIC SERVICE  
COMMISSION

In the Matter of

SEP 24 1999  
 THE APPLICATION OF GRAYSON COUNTY WATER DISTRICT, GRAYSON COUNTY, KENTUCKY FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AUTHORIZING CONSTRUCTION OF MAJOR ADDITIONS AND IMPROVEMENTS TO ITS WATER DISTRIBUTION SYSTEM AND (2) SEEKING APPROVAL OF THE ISSUANCE OF CERTAIN SECURITIES. )  
 )  
 )  
 ) CASE NO. 99-309  
 )  
 )

The Applicant, Grayson County Water District, situated in Grayson County, Kentucky (the "District"), acting by and through its Commission, respectfully tenders this Application and requests that the Public Service Commission of Kentucky enter its Order pursuant to KRS 278.023 and 807 KAR 5:069 issuing a Certificate of Public Convenience and Necessity authorizing the District to construct major additions and improvements to its public water system (the "System") for the purpose of furnishing an adequate supply of pure and potable water for domestic, agricultural and commercial use in the District and approving the issuance of certain securities by the District. In support of this Application and in conformity with the rules of the Public Service Commission, the District states as follows:

1. The District was established by an Order entered by the County Court of Grayson County, Kentucky, on October 25, 1971, upon petition of the requisite number of freeholders of the area involved and after notice and public hearing in the manner set forth in KRS 74.010.

The District is now, and has been since its inception, regulated by the Public Service Commission of Kentucky, and all records and proceedings of the Public Service Commission with reference to the District are incorporated in this Application by reference.

2. The governing body of the District is its Commission, and in conformity with KRS 74.020(1) the County Judge/Executive of Grayson County has entered appropriate Orders appointing the present Commissioners who are residents of the District, such present Commissioners, and their respective offices, being as follows: Ed Nichols, Chairman, John R. Tomes, Secretary, and Peggy Ketterer, Treasurer. Each of the three Commissioners has qualified for office. The mailing address of the District is Grayson County Water District, 113 S. Lee Avenue (P. O. Box 217), Leitchfield, Kentucky 42755-0217, Attention: Kevin Shaw, Manager.

3. In order to finance water service facilities and improvements, the District currently has outstanding, payable from the income and revenues of the System, the revenue bonds identified in the preamble of the proposed Bond-authorizing Resolution appended hereto as Exhibit D.

4. The District's consulting engineers have prepared a Preliminary Engineering Report and a Final Engineering Report as well as detailed plans and specifications for the construction and installation of the new water service facilities and appurtenances (the "Project") that will serve the District. The Preliminary Engineering Report dated August 20, 1997, prepared by Alan H. Vilines, P.E., Bowling Green, Kentucky, together with the Summary Addendum thereto dated December 4, 1998, and the Final Engineering Report dated September 9, 1999, prepared by Haworth, Meyer & Boleyn, Inc., Frankfort, Kentucky (the "Engineers"), are appended hereto as Exhibit A and Exhibit B, respectively. These Exhibits contain, among other things, descriptions of the Project, cost figures and other pertinent data.

It is the opinion of the Commissioners of the District that the public health, safety and general welfare of the citizens and inhabitants of the District will be promoted and served by the construction of the Project and the financing thereof as herein described.

5. The District has caused public advertising to be made according to law soliciting competitive bids for the construction and installation of the Project; has received, opened and

considered the construction bids; and has filed with the United States Department of Agriculture, Rural Development ("USDA"), the data prepared by the Engineers showing the bids received and the recommendations of the Engineers with respect thereto. USDA has approved the District's proposed award of the best bids as evidenced by the USDA letter of concurrence in the bid award appended hereto as Exhibit C.

The District hereby states, through its undersigned Chairman, that the proposed plans and specifications for the Project have been designed to meet the minimum construction and operating requirements set out in 807 KAR 5:066, Section 4(3) and (4), Section 5 (1), Sections 6 and 7, Section 8(1) through (3), Section 9 (1) and Section 10; that all other state approvals or permits for the Project have been obtained; that the existing water rates of the District will produce total revenue requirements as set out in Exhibits A and B; and that construction of the Project is expected to begin on or about November 1, 1999, and to end on or about February 15, 2000.

6. The District further represents that, based upon the projections of the Engineers and the financial studies of USDA, the existing schedule of water service rates and charges will be adequate to amortize the proposed Bonds identified in Section 8 below and to cover other annual debt service and other costs.

7. The estimated costs of and sources of funds for the Project are set out in Exhibit B and in Exhibit E identified below.

8. As shown in Exhibit B and in Exhibit E, the District proposes to finance, in part, the construction and installation of the Project by the issuance of its bonds, to be styled "Water System Revenue Bonds, Series of 1999" (the "Bonds"), in the principal amount of \$1,000,000. A recent preliminary draft of the proposed Bond-authorizing Resolution of the District is appended hereto as Exhibit D.

The District has entered into a loan agreement with USDA pursuant to which USDA will make a loan of \$1,000,000 to the District, to be represented by the Bonds. The Bonds are expected to bear interest at the single, uniform rate of 4.50% per annum. Appended hereto as Exhibit E are copies of letters from USDA to the District setting forth terms, conditions and understandings relating to the loan, together with related USDA correspondence regarding the principal maturities of and interest rate on the Bonds.

With reference to the proposed issuance of the Bonds to USDA, the proceedings relating thereto will provide for the public advertisement of competitive bids for the Bonds according to Kentucky law; and in the event a bid or bids are received for the Bonds at an interest cost basis to the District more advantageous to the District than the loan commitment of USDA, the Bonds will be sold to such other bidder. However, it is not expected any more favorable bids will be received. The Bonds will not be delivered to USDA until such time as approximately the amount of the Bonds has been spent on the Project. This procedure is in accord with USDA rules requiring interim financing of USDA projects to the amount of the USDA loan. Accordingly, construction of the Project will be instituted and funded initially from the proceeds of an interim financing loan to be obtained from the Kentucky Rural Water Finance Corporation ("KRWFC") at a rate not to exceed 4.97% per annum. The interim loan will be secured by (i) the undisbursed proceeds of the interim financing loan and (ii) the proceeds of the Bonds when delivered to USDA according to USDA practices and procedures.

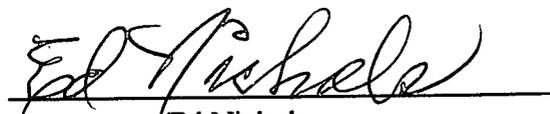
Interim financing is also available to the District from USDA in the event other interim financing sources are not available or are unreasonable.

9. The Commission of the District respectfully represents to the Public Service Commission that there is a genuine need and demand for the Project and that the Commission should enter herein its Order, in compliance with KRS 278.023 and KAR 5:069, (a) issuing its Certificate

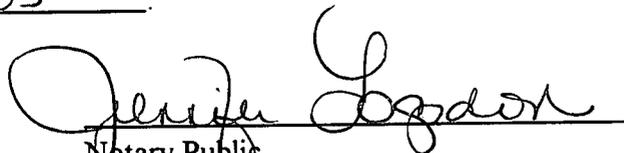


the statements of fact set forth therein are true and accurate to the best of my knowledge and belief.

WITNESS my signature this 23 day of September, 1999.

  
Ed Nichols

Subscribed and sworn to before me this 23 day of September, 1999. My  
commission expires 8-11-2003.

  
Notary Public  
Commonwealth of Kentucky



September 17, 1999

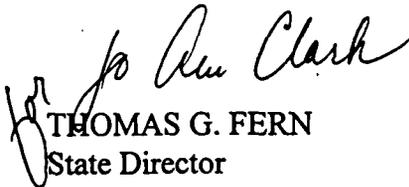
SUBJECT: Grayson County Water District  
Contract I and III- Waterline Expansion  
Concurrence in Contract Award

TO: Rural Development Manager  
Grayson, Kentucky

Based on the bids received and the recommendation of the consulting engineer, Rural Development concurs in the award of the subject contracts to the low bidder, Salmon Construction in the amounts shown below, respectively.

Contract I - Waterline Expansion- \$680,662.00  
Contract II - Waterline Expansion- \$695,175.00

If you have any questions, please contact Jo Ann Clark, State Engineer, at (606) 224-7348.

  
THOMAS G. FERN  
State Director  
Rural Development

cc: Haworth, Meyer & Boleyn, Inc.  
Frankfort, Kentucky

Harper, Ferguson & Davis  
Frankfort, Kentucky

- BOND-AUTHORIZING RESOLUTION -

A RESOLUTION OF THE COMMISSION OF GRAYSON COUNTY WATER DISTRICT, GRAYSON COUNTY, KENTUCKY, PROVIDING FOR THE CONSTRUCTION AND INSTALLATION OF MAJOR IMPROVEMENTS AND ADDITIONS TO THE DISTRICT'S EXISTING MUNICIPAL WATER DISTRIBUTION SYSTEM; AUTHORIZING THE ISSUANCE OF SAID DISTRICT'S \$1,000,000 WATER SYSTEM REVENUE BONDS, SERIES OF 1999, TO PAY THE COSTS THEREOF (TO THE EXTENT NOT OTHERWISE PROVIDED TO BE PAID); CONFIRMING, RATIFYING AND CONTINUING PRE-EXISTING PROVISIONS HERETOFORE ADOPTED BY THE DISTRICT RELATING TO THE COLLECTION, SEGREGATION, DISTRIBUTION AND DISBURSEMENT OF THE INCOME AND REVENUES OF SAID MUNICIPAL WATER DISTRIBUTION SYSTEM; CONFIRMING, RATIFYING AND CONTINUING CONDITIONS AND RESTRICTIONS UNDER WHICH ADDITIONAL BONDS MAY BE ISSUED IN THE FUTURE, PAYABLE FROM THE INCOME AND REVENUES OF THE SYSTEM AND RANKING ON A BASIS OF PARITY WITH THE BONDS HEREIN AUTHORIZED AND OTHER PARITY BONDS OUTSTANDING; AND PROVIDING FOR AN ADVERTISED, PUBLIC, COMPETITIVE SALE OF THE BONDS HEREIN AUTHORIZED.

- TABLE OF CONTENTS -

	<u>PAGES</u>
PREAMBLE	1
SECTION 1. AFFIRMATION OF PREAMBLE RECITALS; AUTHORIZATION OF THE PROJECT; DECLARATION OF NECESSITY	3
SECTION 2. PROJECT TO BE MUNICIPALLY OWNED AND OPERATED	4
SECTION 3. 1999 BOND ISSUE AUTHORIZED; CERTAIN TERMS AND DETAILS	4
SECTION 4. PROVISIONS RELATING TO SALE OF 1999 BOND ISSUE	6
SECTION 5. 1999 BONDS TO BE ISSUED IN FULLY REGISTERED FORM: FULLY REGISTERED BOND FORM	7
SECTION 6. DISPOSITION OF 1999 BOND PROCEEDS; CONSTRUCTION FUND	12
SECTION 7. OPERATION OF SYSTEM; FLOW OF FUNDS (TO CONTINUE AS IN PAST); ACCUMULATION OF REVENUES	13
SECTION 8. COVENANTS TO BONDHOLDERS	17
SECTION 9. PARITY BONDS PERMITTED; TERMS	21
SECTION 10. PROVISIONS OF RESOLUTION CONSTITUTE CONTRACT	23
SECTION 11. STATUTORY MORTGAGE LIEN ACKNOWLEDGED	23
SECTION 12. TAX COVENANTS	23
SECTION 13. SEVERABILITY CLAUSE	25
SECTION 14. REPEAL OF INCONSISTENT PROVISIONS	26
SECTION 15. WHEN RESOLUTION EFFECTIVE	26
SIGNATURES AND CERTIFICATION	26

A RESOLUTION OF THE COMMISSION OF GRAYSON COUNTY WATER DISTRICT, GRAYSON COUNTY, KENTUCKY, PROVIDING FOR THE CONSTRUCTION AND INSTALLATION OF MAJOR IMPROVEMENTS AND ADDITIONS TO THE DISTRICT'S EXISTING MUNICIPAL WATER DISTRIBUTION SYSTEM; AUTHORIZING THE ISSUANCE OF SAID DISTRICT'S \$1,000,000 WATER SYSTEM REVENUE BONDS, SERIES OF 1999, TO PAY THE COSTS THEREOF (TO THE EXTENT NOT OTHERWISE PROVIDED TO BE PAID); CONFIRMING, RATIFYING AND CONTINUING PRE-EXISTING PROVISIONS HERETOFORE ADOPTED BY THE DISTRICT RELATING TO THE COLLECTION, SEGREGATION, DISTRIBUTION AND DISBURSEMENT OF THE INCOME AND REVENUES OF SAID MUNICIPAL WATER DISTRIBUTION SYSTEM; CONFIRMING, RATIFYING AND CONTINUING CONDITIONS AND RESTRICTIONS UNDER WHICH ADDITIONAL BONDS MAY BE ISSUED IN THE FUTURE, PAYABLE FROM THE INCOME AND REVENUES OF THE SYSTEM AND RANKING ON A BASIS OF PARITY WITH THE BONDS HEREIN AUTHORIZED AND OTHER PARITY BONDS OUTSTANDING; AND PROVIDING FOR AN ADVERTISED, PUBLIC, COMPETITIVE SALE OF THE BONDS HEREIN AUTHORIZED.

WHEREAS, pursuant to an approving Order of the Public Service Commission of Kentucky entered on October 25, 1971, and upon petition and hearing following proper public notice according to the provisions of Chapter 74 of the Kentucky Revised Statutes ("KRS"), an Order was duly entered by the County Court of Grayson County, Kentucky, on December 6, 1971, determining necessity and creating and establishing the Grayson County Water District (the "District") and defining the geographical area thereof, and the Court thereafter formally appointed the Water District Commission, the same thereupon constituting and being a public body corporate with all powers and authority as provided in KRS Chapter 74; and

WHEREAS, by Resolution of the Commission of the District adopted on January 25, 1974 (the "1974 Resolution"), the District authorized and thereafter issued its "Water System Revenue Bonds, Series of 1974" (the "1974 Bonds") for the purpose of providing funds for the initial construction and installation of a municipal water distribution system (the "System") to serve the area of the District; and

WHEREAS, it is provided in and by Section 11 of said 1974 Resolution that the District may issue additional bonds ranking on a basis of parity and equality with the District's outstanding bonds for the purpose of constructing additions and extensions to the System, if the United States

of America, Department of Agriculture, Rural Development ("USDA"), as the holder of at least 75% in principal amount of the outstanding bonds, consents to the issuance of such additional parity bonds, and by Resolution of the Commission of the District adopted on September 1, 1977 (the "1977 Resolution"), and pursuant to the consent of USDA as aforesaid, the District authorized and thereafter issued to USDA its Water System Revenue Bonds, Series of 1977 (the "1977 Bonds"), on a basis of parity with the 1974 Bonds for the purpose of providing funds for the construction and installation of major additions and extensions to the System; by Resolution of the Commission of the District adopted on August 20, 1981 (the "1981 Resolution"), and pursuant to a waiver and consent obtained from USDA, the District authorized and thereafter issued its Water System Revenue Bonds, Series of 1981 (the "1981 Bonds"), on a basis of parity with the 1974 Bonds and 1977 Bonds for the purpose of providing funds for the construction and installation of major additions and extensions to the System; by Resolution of the Commission of the District adopted on October 25, 1985 (the "1985 Resolution"), and pursuant to a waiver and consent obtained from USDA, the District authorized and thereafter issued its Water System Revenue Bonds, Series of 1985 (the "1985 Bonds"), on a basis of parity with the 1974 Bonds, 1977 Bonds and 1981 Bonds for the purpose of providing funds for the construction and installation of major additions and extensions to the System; by Resolution of the Commission of the District adopted on October 28, 1988 (the "1988 Resolution"), and pursuant to a waiver and consent obtained from USDA, the District authorized and thereafter issued its Water System Revenue Bonds, Series of 1988 (the "1988 Bonds"), on a basis of parity with the 1974 Bonds, 1977 Bonds, 1981 Bonds and 1985 Bonds for the purpose of providing funds for the construction and installation of major additions and extensions to the System; by Resolution of the Commission of the District adopted on August 7, 1991 (the "1991 Resolution"), and pursuant to a waiver and consent obtained from USDA, the District authorized and thereafter issued its Water System Revenue Bonds, Series of 1991 (the "1991 Bonds"), on a basis of parity with the 1974 Bonds, 1977 Bonds, 1981 Bonds, 1985 Bonds and 1991 Bonds for the purpose of providing funds for the construction and installation of major additions and extensions to the System; by Resolution of the Commission of the District adopted on February 13, 1995 (the "1995 Resolution"), and pursuant to a waiver and consent obtained from USDA, the District thereafter authorized and issued its Water System Revenue Bonds, Series of 1995 (the "1995 Bonds"), on a basis of parity with the 1974 Bonds, 1977 Bonds, 1981 Bonds, 1985 Bonds, 1988 Bonds, 1991 Bonds and 1995 Bonds; and by Resolution of the Commission of the District adopted on May 19, 1997 (the "1997 Resolution"), and pursuant to a waiver and consent obtained from USDA, the District authorized and thereafter issued its Water System Revenue Bonds, Series of 1997 (the "1997 Bonds"), on a basis of parity with the 1974 Bonds, 1977 Bonds, 1981 Bonds, 1985 Bonds, 1988 Bonds, 1995 Bonds and 1997 Bonds; and

WHEREAS, pursuant to the parity bond requirements of the 1974 Resolution, the 1977 Resolution, the 1981 Resolution, the 1985 Resolution, the 1988 Resolution, the 1991 Resolution, the 1995 Resolution and the 1997 Resolution (the "Prior Resolutions"), the necessary waiver and consent of USDA, as the holder of the 1974 Bonds, 1977 Bonds, 1981 Bonds, 1985 Bonds, 1988 Bonds, 1991 Bonds, 1995 Bonds, and 1997 Bonds (the "Prior Resolutions"), has been obtained

so that the Water System Revenue Bonds, Series of 1999, herein authorized, may now be authorized and issued on a basis of parity with the Prior Bonds; and

WHEREAS, in proceedings before the Public Service Commission of Kentucky, the District has obtained the right and authority to construct and operate major extensions and additions to the System, and plans and specifications have heretofore been prepared by Haworth, Meyer & Boleyn, Frankfort, Kentucky, and approved by the District's Commission and all State and supervisory authorities having jurisdiction thereof; and it is the opinion of the Commission of the District that it is feasible to undertake the construction and installation of such new facilities at this time; and

WHEREAS, it has been determined upon the basis of public bids for construction duly solicited in the manner required by law, and upon the basis of other costs and estimates, that the aggregate of all costs and expenses in connection with the aforesaid project will be \$3,050,000; and to provide such funds the District has received from USDA an offer to make a USDA loan to the District in the amount of \$1,000,000, which will be supplemented by a USDA Grant in the amount of \$500,000, a Kentucky State Surplus Grant in the amount of \$500,000 and by available funds of the District in the amount of \$50,000; and

WHEREAS, it is now appropriate for the District to provide for borrowing said sum of \$1,000,000 through issuance and sale of its Water System Revenue Bonds, Series of 1999 (the "1999 Bonds") according to authority of Kentucky Revised Statutes ("KRS") Chapters 74 and 106 and the provisions of the Prior Resolutions permitting the issuance of parity bonds; and the 1999 Bonds shall be payable as to both principal and interest solely (except as to capitalized interest) from the income and revenues to be derived from the operation of the System, as extended from time to time, and shall not constitute an indebtedness of the District within the meaning of debt-limiting provisions of the Constitution of Kentucky;

NOW, THEREFORE, THE COMMISSION OF GRAYSON COUNTY WATER DISTRICT, GRAYSON COUNTY, KENTUCKY, DOES HEREBY RESOLVE AS FOLLOWS:

SECTION I

AFFIRMATION OF PREAMBLE RECITALS;  
AUTHORIZATION OF THE PROJECT;  
DECLARATION OF NECESSITY

All statements and recitals set forth in the preamble of this Resolution, including the terms defined therein, are hereby affirmed and adopted as a part of this Resolution.

It is hereby further determined and declared to be necessary in the interests of the general welfare of the citizens and inhabitants of the District that the District undertake at this

time the construction and installation of major additions and extensions to the District's municipal water distribution system (the "Project"), all substantially according to the plans, specifications and designs prepared for the District by Haworth, Meyer & Boleyn, Frankfort, Kentucky (the "Engineer"). Immediate undertaking of such construction and installation is hereby authorized.

## SECTION 2

### PROJECT TO BE MUNICIPALLY OWNED AND OPERATED

The construction and installation of the Project is undertaken by the District for public purposes and same shall constitute and be a part of the District's municipal water distribution system (the "System," as expanded and improved by the Project), and so long as any of the 1999 Bonds hereinafter authorized, or bonds issued on a parity therewith, shall remain outstanding and unpaid as to principal or interest, the System shall continue to be municipally owned, controlled, operated and maintained by the District for the security and source of payment of the 1999 Bonds and all other parity bonds outstanding heretofore or hereafter issued. The Project is to be constructed, installed and acquired and the System is to be operated pursuant to the provisions of KRS Chapters 74 and 106, now in full force and effect.

## SECTION 3

### 1999 BOND ISSUE AUTHORIZED: CERTAIN TERMS AND DETAILS

For the purpose of providing funds to defray the costs of the Project (to the extent not otherwise provided to be paid), including all necessary and proper appurtenances, and expenses incident thereto and incident to the issuance of the 1999 Bonds hereinafter authorized, there are hereby authorized to be issued the District's Water System Revenue Bonds, Series of 1999 (the "1999 Bonds"), in the principal amount of One Million Dollars (\$1,000,000), with reservation of right on the part of the District to issue additional bonds in the future, payable from the income and revenues of the System, subject to the conditions and restrictions hereinafter reaffirmed, readopted and set forth. The 1999 Bonds hereby authorized shall be offered at public sale as provided in Section 4 hereof and shall be issuable in the form of a single fully registered bond as provided in Section 5 hereof.

The 1999 Bonds shall be dated as of the date of delivery to the original purchaser thereof, shall mature as to principal in installments on January 1 in each of the years 2000 to 2039, inclusive, as set forth in the schedule appearing below; and shall bear interest from their date until payment of principal, such interest to the respective principal maturity dates to be payable semiannually on January 1 and July 1 of each year, and such interest to be at such rate as may be established by a supplemental Resolution upon the basis of competitive sale of the 1999 Bonds as

hereinafter provided. The installments of principal of 1999 Bonds, in fully registered form as aforesaid, shall be as set forth in the following schedule:

<u>Year</u>	<u>Principal</u>	<u>Year</u>	<u>Principal</u>	<u>Year</u>	<u>Principal</u>
2002	\$ 10,000	2015	\$ 19,000	2028	\$ 33,000
2003	11,000	2016	19,000	2029	34,000
2004	11,000	2017	20,000	2030	36,000
2005	12,000	2018	21,000	2031	37,000
2006	12,000	2019	22,000	2032	39,000
2007	13,000	2020	23,000	2033	41,000
2008	13,000	2021	24,000	2034	42,000
2009	14,000	2022	25,000	2035	45,000
2010	15,000	2023	26,000	2036	47,000
2011	15,000	2024	27,000	2037	50,000
2012	16,000	2025	29,000	2038	51,000
2013	17,000	2026	30,000	2039	53,000
2014	17,000	2027	31,000		

provided, however, that installments of principal of 1999 Bonds maturing on and after January 1, 2010, shall be subject to prepayment at the option of the District prior to maturity in whole or from time to time in part in inverse order of maturities (less than all of a single maturity to be selected by lot) on any interest payment date on and after January 1, 2009, upon terms of par plus accrued interest without any prepayment premium, upon thirty (30) days' prior written notice mailed to the registered holder or holders of the 1999 Bonds; provided, that so long as USDA is the owner of any of the 1999 Bonds, same may be prepaid in whole or in part at any time at par plus accrued interest, and without notice or prepayment premium. The 1999 Bonds may be prepaid only in increments of \$1,000.

Both principal of and interest on the 1999 Bonds shall be payable, without deduction for exchange or collection charges, in such coin or currency of the United States of America as at the time of payment shall be legal tender for the payment of debts due the United States of America, to the registered holder at the address shown on the registration books of the District or, so long as USDA is the registered holder, at the office or address as may be designated by USDA from time to time.

If any District officer whose signature appears on any 1999 Bond shall cease to be such officer prior to delivery, such signature shall nevertheless be valid and binding for all purposes, the same as if such officer had continued in office until the time of delivery of such 1999 Bond. The 1999 Bonds, together with the Prior Bonds, and the interest thereon, and any bonds which may hereafter be issued on a basis of parity therewith subject to the conditions and restrictions hereinafter set forth, shall be payable only out of the Water System Bond and Interest Sinking Fund created by the 1974 Resolution, as hereinafter more specifically provided, and shall be a

valid claim of the holder thereof only against said Fund and the fixed portion or amount of the revenues of the System which the District has pledged to said Fund, subject to the terms hereof.

The District finds and declares that the 1999 Bonds herein authorized to be issued shall rank on a basis of parity and equality as to security and source of payment with the District's previously issued and outstanding Prior Bonds, inasmuch as the District is in compliance with all covenants and undertakings in connection with the Prior Bonds and has obtained the consent of USDA to the issuance of the parity 1999 Bonds herein authorized.

#### SECTION 4

#### PROVISIONS RELATING TO SALE OF 1999 BOND ISSUE

The 1999 Bonds authorized by this Resolution shall be publicly offered for sale according to a Notice of Sale of Bonds conforming to the requirements of KRS Chapter 424 (and particularly KRS 424.140(3) and KRS 424.360), which shall be published one time, not less than seven (7) days nor more than twenty-one (21) days prior to the date therein specified (by and at the discretion of the Chairman of the Commission of the District) for the opening and consideration of purchase bids, in each of the following: (a) the qualified legal newspaper published in Grayson County, Kentucky, and having the largest circulation within the District; and (b) The Courier-Journal, Louisville, Kentucky, a legal newspaper having statewide circulation.

Said Notice shall state the name and amount of 1999 Bonds to be sold, the time of the sale and other details concerning the 1999 Bonds and the sale and shall inform prospective bidders that a copy of the Official Notice of Bond Sale, setting out the maturities, security of the 1999 Bonds, provisions as to redemption prior to maturity and related information, may be obtained from the District. Such Official Notice shall contain, inter alia, substantially the following bidding requirements:

(A) Bidders shall be limited to institutions or persons having knowledge and experience in financial and business matters who are capable of evaluating the merits and risks of the 1999 Bonds and who are not purchasing for more than one account and do not intend to redistribute the 1999 Bonds. The District will make available to any such qualified bidder, upon written request, any financial and other material information regarding the District and the System in the District's possession. Bidders are required to bid a cash price of not less than par value for the 1999 Bonds.

(B) The single interest rate must be in a multiple of 1/8 or 1/10 of one percent.

(C) Bids will be considered only for the entire 1999 Bond issue.

(D) Bidders (except USDA) are required to deposit a good faith check by cashier's check or certified check in the minimum amount of 2% of the face amount of the 1999 Bonds,

which good faith deposit may be applied as partial payment for the 1999 Bonds, or as liquidated damages in the event that such bidder, if successful, fails to comply with the terms of his bid.

(E) Preference in award will be given to the bid resulting in the lowest net interest cost to the District.

(F) The lowest net interest cost will be determined by deducting the total amount of any premium bid from the aggregate amount of interest upon the 1999 Bonds, computed from the first day of the month following the date of sale of the 1999 Bonds (even though the 1999 Bonds will bear interest only from the date of delivery) to the final maturity specified in each respective bid.

(G) The District expects to deliver, and the successful bidder must be prepared to accept delivery of and pay for, the 1999 Bonds at the office of the District within 45 days after the date of sale thereof. If the 1999 Bonds are not ready for delivery and payment within forty-five days from the aforesaid date of sale, the successful bidder shall be relieved of any liability to accept delivery of the 1999 Bonds, except that 1999 Bonds purchased by any agency of the Federal government will be delivered to it at a place and time designated by such agency in accordance with its established practices and procedures.

(H) The District reserves the right, in its discretion, to determine the best bid or bids, to waive any informality or irregularity and to reject any or all bids.

(I) The District will furnish the 1999 Bonds, together with customary closing documents, including no-litigation certificate.

(J) The successful bidder will receive the approving legal opinion of Harper, Ferguson & Davis, Bond Counsel, Louisville, Kentucky, as to the legality of and tax-exempt status of interest on the 1999 Bonds, without additional cost to the successful bidder.

In the event that there is no bid, or that all bids are rejected, the District may re-advertise the sale pursuant to this Resolution.

Bond Counsel having submitted to the Commission of the District forms of the Notice of Sale of Bonds and the Official Notice of Bond Sale, together with an Official Bid Form for use by all bidders except USDA, said documents are hereby approved and authorized for use in connection with the aforesaid sale of the 1999 Bonds.

## SECTION 5

### 1999 BONDS TO BE ISSUED IN FULLY REGISTERED FORM; FULLY REGISTERED BOND FORM

Upon the sale of the 1999 Bonds, the District shall issue a single fully registered 1999 Bond numbered R-1 (hereinafter referred to as the "Fully Registered Bond"). The Fully

Registered Bond shall be in the aggregate principal amount of the 1999 Bond it represents, maturing as to principal in installments as set out in Section 3 hereof. The Fully Registered Bond shall be of type composition, on paper of sufficient weight and strength to prevent deterioration until the last day of maturity of any installment of principal as stated therein, and shall conform in size to standard practice. The Fully Registered Bond shall, upon execution on behalf of the District (which execution shall be by manual signatures of the Chairman and Secretary of the Commission, and actual impression of the corporate seal), constitute the 1999 Bond issue herein authorized and referred to, shall be non-negotiable, without interest coupons, registered as to principal and interest, payable as directed by the payee, and be in substantially the form hereinafter set forth.

The District hereby directs that books for the registration and for the transfer of the Fully Registered Bond shall be kept by the Secretary, who is hereby appointed as Bond Registrar in connection with such Bond. The Fully Registered Bond shall be transferable only upon said Bond Registrar's books at the request of the registered holder thereof in person or by his attorney duly authorized in writing, upon surrender thereof together with a written instrument of transfer satisfactory to the Secretary duly executed by the registered holder or his duly authorized attorney. Upon such transfer of the Fully Registered Bond, the Bond Registrar shall complete (with the name of the transferee), date and execute the registration schedule appearing on the Fully Registered Bond and deliver the Fully Registered Bond to such transferee. The person in whose name the Fully Registered Bond shall be properly registered shall be deemed and regarded as the absolute owner thereof for all purposes, and payment of either principal thereof or interest thereon shall be made only to or upon the order of the registered holder thereof or his legal representative, but such registration may be changed as hereinabove provided. All such payments shall be valid and effectual to satisfy and discharge the liability upon the Fully Registered Bond to the extent of the sum or sums so paid. The face amount of the Fully Registered Bond, portions of which mature on different dates, will be reduced upon the payment of each maturity, and the Secretary shall keep appropriate records of all payments (both principal and interest) with respect to the Fully Registered Bond.

The Fully Registered Bond shall be in substantially the following form (with appropriate insertions):

(FORM OF FULLY REGISTERED BOND)

UNITED STATES OF AMERICA  
COMMONWEALTH OF KENTUCKY  
GRAYSON COUNTY WATER DISTRICT  
GRAYSON COUNTY, KENTUCKY  
WATER SYSTEM REVENUE BOND, SERIES OF 1999

No. R-1

\$1,000,000

KNOW ALL MEN BY THESE PRESENTS:

That Grayson County Water District (the "District"), acting by and through its Commission, a public body corporate created and existing pursuant to Chapter 74 of the Kentucky Revised Statutes and situated in Grayson County, Kentucky, for value received, hereby promises to pay to the registered holder hereof, as hereinafter provided, solely from the special fund hereinafter identified, the sum of ONE MILLION DOLLARS (\$1,000,000) on the first day of January in years and installments as follows:

<u>Year</u>	<u>Principal</u>	<u>Year</u>	<u>Principal</u>	<u>Year</u>	<u>Principal</u>
-------------	------------------	-------------	------------------	-------------	------------------

(Here the printer will print the principal maturities of the 1999 Bonds.)

without deduction for exchange or collection charges, in such coin or currency of the United States of America as at the time of payment shall be legal tender for the payment of debts due the United States of America, and in like manner, solely from said special fund, to pay interest on the balance of said principal sum from time to time remaining unpaid, without deduction for exchange or collection charges and in like coin or currency, at the rate of \_\_\_\_\_ (\_\_\_\_%) per annum, semiannually on the first days of January and July in each year hereafter until said sum is paid, except as the provisions hereinafter set forth with respect to prepayment may be and become applicable hereto, both principal and interest being payable to the registered holder hereof at the address shown on the registration books of the District or, so long as the United States of America, Department of Agriculture, is the registered holder of this Bond, at the office or address as may be designated by said Department of Agriculture from time to time.

This Bond is the Bond in fully registered form representing a total authorized issue of Bonds in the principal amount of \$1,000,000 issued by the District pursuant to the Constitution and Statutes of the Commonwealth of Kentucky, including Chapters 74 and 106 of the Kentucky Revised Statutes, and pursuant to a duly adopted Resolution of the District, for the purpose of paying the costs (to the extent not otherwise provided to be paid) of the construction and installation of major extensions and additions to the District's municipal water distribution system (the "System"), together with appurtenant facilities, and incidental expenses.

This Bond and the issue which it represents, together with such additional bonds ranking on a parity therewith as have heretofore been issued and are outstanding and as may hereafter be issued and outstanding from time to time in accordance with the conditions and restrictions set forth in the Resolution authorizing the issuance of this Bond, are payable from and secured by a pledge of a fixed portion of the income and revenues to be derived from the operation of the System, which fixed portion shall be sufficient to pay the principal of and interest on this Bond and the issue of which it forms a part, and any outstanding parity bonds, as and when the same shall become due and payable, and which shall be set aside as a special fund for that purpose and identified as the "Water System Bond and Interest Sinking Fund."

A statutory mortgage lien upon the System and appurtenant facilities, together with all future additions and improvements thereto, and extensions thereof, is created by Section 106.080

of the Kentucky Revised Statutes and by the aforesaid Resolution for the benefit and protection of the holder of this Bond, and the same shall remain in effect until payment in full of the principal of and interest on this Bond.

This Bond does not in any manner constitute an indebtedness of the District within the meaning of the Statutes and Constitution of Kentucky, and the District is not and shall not be obligated to pay this Bond or the interest hereon except from said special fund. The District, acting by and through its Commission, covenants that it will fix, and if necessary adjust from time to time, such rates and charges for use of the services and facilities of the System and will collect and account for the income and revenues therefrom sufficient to pay promptly the interest on and principal of this issue of Bonds, and all other bonds ranking on a parity therewith as may be issued and outstanding from time to time in accordance with the conditions and restrictions prescribed in that connection, as well as to pay the costs of operation and maintenance of the System.

This Bond shall be registered as to principal and interest in the name of the holder hereof, after which it shall be transferable only upon presentation to the Secretary of the District, as the Bond Registrar, with a written transfer duly acknowledged by the registered holder or his duly authorized attorney, which transfer shall be noted upon this Bond and upon the books of the District kept for that purpose.

The District, at its option, shall have the right to prepay, on any interest payment date on and after January 1, 2009, in the inverse chronological order of the installments due on this Bond, the entire principal amount of this Bond then remaining unpaid, or such lesser portion thereof in multiples of One Thousand Dollars (\$1,000) as the District may determine, at a price in an amount equivalent to the principal amount to be prepaid plus accrued interest to the date of prepayment, without any prepayment premium. Notice of such prepayment shall be given by registered mail to the registered holder of the Bond at least thirty (30) days prior to the date fixed for prepayment. Provided, however, that so long as the United States of America, Department of Agriculture, is the registered holder of this Bond, this Bond may be prepaid at any time in whole or in part, at par or face value and without notice or prepayment premium.

Upon default in the payment of any principal or interest payment on this Bond or upon failure by the District to comply with any other provisions of this Bond or with the provisions of the Resolution authorizing the issuance of this Bond, the registered holder may, at his option, institute proceedings to enforce all rights and remedies provided by law or by said Resolution.

This Bond is exempt from ad valorem taxation in the Commonwealth of Kentucky.

IT IS HEREBY CERTIFIED, RECITED AND DECLARED that all acts, conditions and things required to exist, happen and be performed precedent to and in the issuance of this Bond do exist, have happened and have been performed in due time, form and manner as required by law, and that the face amount of this Bond, being the total authorized amount of Bonds of the issue of which this Bond is a part, together with all other obligations of the District, does not exceed any limit prescribed by the Constitution or Statutes of the Commonwealth of Kentucky.

IN WITNESS WHEREOF, the Grayson County Water District, in the Commonwealth of Kentucky, by its Commission, has caused this Bond to be executed by the Chairman of its Commission, attested by the Secretary, and its corporate seal to be hereunto affixed, on the date of this Bond, which is \_\_\_\_\_

GRAYSON COUNTY WATER  
DISTRICT

By \_\_\_\_\_  
Chairman of the Commission

ATTEST:

\_\_\_\_\_  
Secretary

(Seal of District)

PROVISION FOR REGISTRATION

This Bond shall be registered on the books of the Grayson County Water District kept for that purpose by the Secretary, as Bond Registrar, upon presentation hereof to the Secretary, who shall make notation of such registration in the registration blank, and this Bond may thereafter be transferred only upon written transfer acknowledged by the registered holder or his attorney, such transfer to be made on said books and endorsed hereon.

(FORM OF REGISTRATION)

<u>Date of Registration</u>	<u>Name of Registered Holder</u>	<u>Signature of the Water District's Bond Registrar</u>
	United States of America Department of Agriculture State Office 771 Corporate Dr., Suite 200 Lexington, Kentucky 40503*	
_____		
_____		
_____		

\*(To be inserted if USDA purchases the 1999 Bonds)

## SECTION 6

### DISPOSITION OF 1999 BOND PROCEEDS: CONSTRUCTION FUND

The Secretary of the District shall be the custodian of all funds belonging to and associated with the System, as expanded and improved from time to time, and such funds shall be deposited in the Leitchfield Deposit Bank & Trust Company, Leitchfield, Kentucky, or in such other bank or banks in Kentucky as the Commission of the District may from time to time designate (hereinafter sometimes referred to, singularly and collectively, as the "Depository Bank"). All such moneys of the District deposited in the Depository Bank in excess of the amount insured by the Federal Deposit Insurance Corporation ("FDIC") shall be secured by the Depository Bank in accordance with U. S. Treasury Department Circular No. 176. The Secretary shall execute a fidelity bond in an amount and with a surety company approved by USDA so long as it is the holder of any of the 1999 Bonds; and USDA and the District shall be named co-obligees in such surety bond, and the amount thereof shall not be reduced without the written consent of USDA. The proceeds of the 1999 Bonds shall be applied as follows:

Upon the issuance and delivery of the 1999 Bonds authorized by this Resolution, the entire proceeds thereof shall be deposited in an account designated "Grayson County Water District Series of 1999 Construction Fund" (the "Construction Fund"), hereby created. Said 1999 Bond proceeds, together with proceeds of the interim financing obligations described below, shall constitute a part of the Construction Fund and shall be applied, to the extent necessary, in paying the costs incident to constructing, installing and acquiring the Project, including expenses incurred in the issuance of the 1999 Bonds and paying interim financing obligations (both principal and interest) incurred in connection with the Project as authorized by said separate interim financing Resolution of the Commission of the District; provided, however, any 1999 Bond proceeds so used to pay such interim financing obligations may be disbursed directly to the appropriate lending institution(s) without the requirement of being deposited to the Construction Fund.

A sum in the Construction Fund estimated to be equal to interest which will accrue on the 1999 Bonds (following delivery thereof) during construction and development of the Project shall be earmarked, used and applied to the payment of interest on the 1999 Bonds next becoming due.

Disbursements from the Construction Fund shall be made by checks signed by the District Secretary, and such disbursements shall be authorized and approved in writing by the District Chairman and Secretary and, if USDA is the purchaser of the Bonds, by USDA. Reference is made in this connection to the provisions of the separate interim financing Resolution adopted concurrently herewith.

Pending disbursement, the 1999 Bond proceeds shall be deposited, as aforesaid, in the Construction Fund, and to the extent that such deposit causes the aggregate deposits by the District in the Depository Bank to be in excess of the amount insured by FDIC, the same shall be secured by a surety bond or bonds furnished by a surety company or companies qualified to do

business in Kentucky and approved by the Commission of the District, or by a valid pledge of direct obligations of the United States Government, or obligations as to which the payment of principal and interest are guaranteed by the United States Government, having a market value at least equivalent to such deposit.

Where the moneys on deposit in the Construction Fund exceed the estimated disbursements on account of the Project for the next 60 days, the District shall direct the Depository Bank to invest such excess funds in direct obligations of, or obligations the principal of and interest on which are guaranteed by, the United States Government, which shall mature not later than six months after the date of such investment and which shall be subject to redemption at any time by the holder thereof. The earnings from any such investments shall be deposited in the Construction Fund by the District, unless otherwise authorized by USDA.

In the event any unexpected balance shall remain in the Construction Fund after completion of the Project, and payment of all of the costs thereof, as certified by the Engineer, such unexpended balance, subject to the terms and conditions of the aforesaid USDA loan, and to USDA approval, shall be transferred and deposited in the Water System Bond and Interest Sinking Fund, hereinafter referred to, and shall be used at the earliest practicable date for the retirement of 1999 Bonds by purchase thereof (or principal prepayment) in inverse numerical and maturity order.

In the event that the amount hereinabove provided to be set aside from 1999 Bond proceeds for payment for interest during the construction and development of the Project should prove to be insufficient for such purpose, additional moneys may, upon approval by USDA, be withdrawn from the Construction Fund and so applied, inasmuch as interest during such period is a proper part of the cost of the Project, to the extent authorized by USDA.

Pending disbursements for the authorized purposes, the proceeds of all 1999 Bonds at any time issued pursuant to this Resolution shall be subject to a first and paramount lien and charge in favor of the holders of 1999 Bonds issued and outstanding hereunder and for their further security.

## SECTION 7

### OPERATION OF SYSTEM. FLOW OF FUNDS (TO CONTINUE AS IN PAST); ACCUMULATION OF REVENUES

From and after issuance and delivery of any 1999 Bonds herein authorized or permitted to be issued, and so long as any thereof remain outstanding and unpaid, the System shall continue to be operated on a fiscal year basis beginning each January 1 and ending on the next December 31, and on that basis the income and revenues shall be collected, segregated, accounted for and distributed as follows:

A separate and special fund or account of the District, distinct and apart from all other funds and accounts, was heretofore created by the 1974 Resolution and is designated and identified as the "Grayson County Water District Water Revenue Fund" (the "Revenue Fund"), which shall be maintained with the Depository Bank; and the District covenants and agrees that it will continue to deposit therein, promptly as received from time to time, all income and revenues of the System as hereinafter defined. The moneys in the Revenue Fund from time to time shall continue to be used and disbursed and applied by the District only for the purposes, and in the manner and order of priorities, specified in the succeeding subsections of this Section 7, all as permitted by applicable statutes, and in accordance with pre-existing contractual commitments, as follows:

(A) A separate and special fund or account of the District was created by the 1974 Resolution and designated the "Grayson County Water District Water System Bond and Interest Sinking Fund" (the "Bond Fund"), which shall continue to be maintained so long as any of the Prior Bonds heretofore authorized and payable from said Fund and the 1999 Bonds herein authorized or additional parity bonds permitted to be issued are outstanding, in the Depository Bank, and all moneys deposited therein from time to time shall be used and disbursed and applied, and are hereby irrevocably pledged, solely for the purpose of paying the principal of and interest on all bonds as may have been issued and outstanding from time to time pursuant to the authority of the Prior Resolutions and additional parity bonds, if any are issued.

There shall continue to be transferred on or before the 20th day of each month from the Revenue Fund, as a first charge thereon, and deposited in the Bond Fund, sums not less than the total principal and interest requirements on all bonds outstanding issued pursuant to authority of said Prior Resolutions. In addition to amortization requirements on the presently outstanding Prior Bonds payable from the Bond Fund, there shall be set aside and paid into the Bond Fund on account of the 1999 Bonds herein authorized to be issued, and following delivery thereof, sums not less than:

- (i) beginning with and including the month in which interest shall last be payable from 1999 Bond proceeds, a sum equal to one-sixth (1/6) of the next succeeding interest installment to become due on all 1999 Bonds then outstanding; and
- (ii) beginning on January 20, 2001, a sum equal to one-twelfth (1/12) of the principal of all 1999 Bonds maturing on the next succeeding January 1.

In the event additional parity bonds are issued pursuant to the conditions and restrictions set forth hereinafter, the monthly deposits to the Bond Fund shall be increased to provide for payment of interest thereon and the principal thereof as the same respectively become due.

Moneys from time to time in the Bond Fund may be held in cash, in which event the same shall, to the extent not insured by FDIC, be secured by a valid pledge of bonds, notes, or certificates of indebtedness of the United States Government having at all times an equal market value; or the same may, upon order of the Commission, be invested and reinvested in interest-

bearing obligations of, or obligations the principal of and interest on which are guaranteed by, the United States Government, maturing not later than the date on which such funds are needed to pay principal of and interest on outstanding bonds. Income from any such investments shall be accumulated in the Bond Fund and may be invested in the same manner.

(B) A separate and special fund or account of the District was heretofore created in and by the 1974 Resolution, which fund is hereby ratified, confirmed and ordered to be continued, and the same is designated and identified as the "Grayson County Water District Water Depreciation Fund" (the "Depreciation Fund").

After observing the priority of deposits set forth in subsection (A) above, which are cumulative, there shall be set apart and paid into the Depreciation Fund each month not less than \$4,172 (or more, if fixed by Resolution of the Commission of the District) from the remaining funds in the Revenue Fund, such monthly deposits to continue so long as any bonds payable from the income and revenues of the System remain outstanding and unpaid.

In addition to the above deposits from the Revenue Fund, there shall also be deposited in the Depreciation Fund, as received, the proceeds of all property damage insurance (except public liability) maintained in connection with the System, and the cash proceeds of any surplus, worn out or obsolescent properties of the System, if the same be sold upon order of the Commission. As required by the provisions of the 1974 Resolution, any fees which may be levied and collected by the Commission of the District for the privilege of connecting to the System (excluding initial deposits received in aid of the Project), shall be paid, as received, into the Depreciation Fund. The term "cash revenues" of the System, as used in this Section 7, means all proceeds of water service rates and charges, and does not include any of the cash items enumerated in this paragraph.

The Depreciation Fund shall be available and may be withdrawn and used by the District, upon appropriate certification to the bank in which said Fund is located, for the purpose of paying the cost of unusual or extraordinary maintenance, repairs, renewals or replacements, not included in the Annual Budget of Current Expenses, and the cost of constructing additions and improvements to the System which will either enhance its revenue-producing capacity or provide a high degree of service. Said Fund shall also be available for transfer to the Bond Fund in order to avoid default in connection with any bonds payable from the Bond Fund.

At any time when the accumulations in the Depreciation Fund shall exceed anticipated and foreseeable needs for authorized purposes, all or any portion of such excess may be invested and reinvested upon order of the Commission in interest-bearing obligations of, or obligations the principal of and interest on which are guaranteed by, the United States Government, maturing or subject to redemption at the option of the holder not later than three (3) years from the date of investment; but as and when funds may be required for authorized purposes a sufficient portion thereof shall be converted into cash and so applied. All investments of money in the Depreciation Fund shall be carried to the credit of said Fund; all income from investments and any profit from

the sale thereof shall be credited thereto; and any expense incident to investment or reinvestment, together with any loss from forced conversion of investments into cash, shall be charged thereto.

(C) A special and separate fund of the District was heretofore created by the 1974 Resolution, distinct and apart from all other funds and accounts of the District, designated and identified as the "Grayson County Water District Operation and Maintenance Fund" (the "Operation and Maintenance Fund"), and the same is hereby ratified and continued for the benefit of the System and all bonds payable from the income and revenues of the System. So long as any bonds payable from the Bond Fund remain outstanding and unpaid, there shall continue to be deposited monthly into the Operation and Maintenance Fund, from moneys remaining in the Revenue Fund, after making the transfers required by subsections (A) and (B) of this Section 7 (which are cumulative), sufficient funds to meet the Current Expenses of operating and maintaining the System, pursuant to the Annual Budget, for which provision is hereafter made, and to accrue an operation and maintenance reserve not in excess of anticipated requirements for a two-month period pursuant to the Annual Budget.

(D) Subject to the provisions of subsections (A), (B), and (C) of this Section 7, which are cumulative, and after paying or providing for the payment of debt service on any subordinate obligations, there shall be transferred within sixty (60) days after the end of each fiscal year the balance of excess funds in the Revenue Fund on such date to the Bond Fund to be used in redeeming outstanding bonds payable from the Bond Fund in direct numerical or maturity order or purchasing such outstanding bonds at a price not to exceed the price at which such bonds may be redeemed on the next succeeding redemption date; provided, however, that notwithstanding the provisions hereof, the District reserves the right to redeem bonds which are redeemable without redemption premium prior to redeeming bonds which are only redeemable upon the payment of redemption premium.

\* \* \* \* \*

All payments into the above special funds shall be made on or before the twentieth (20th) day of each month, except that when the twentieth (20th) day of any month shall be a Sunday or a legal holiday, then such payment shall be made on the next succeeding business day.

All moneys held in any of the above special funds shall be kept apart from all other District funds and shall be deposited in the Depository Bank, and all such deposits which cause the aggregate of all deposits of the District therein to be in excess of the amount secured by FDIC shall (unless invested as herein authorized) be secured by a surety bond or bonds or by pledge of direct obligations or by guaranteed bonds or securities of the United States Government having a market value equivalent to such deposit.

## SECTION 8

### COVENANTS TO BONDHOLDERS

The District hereby irrevocably covenants and agrees with the holder or holders of any and all 1999 Bonds and parity bonds at any time issued and outstanding pursuant to authority of this Resolution that so long as the same or any part thereof or interest thereon remain outstanding and unpaid:

(A) It will faithfully and punctually perform all duties with reference to the System required by the Constitution and laws of the Commonwealth of Kentucky, and by the terms and provisions of this Resolution.

(B) It will at all times operate the System on a revenue-producing basis, and will permit no free services to be rendered or afforded thereby.

(C) It will maintain the System in good condition through application of revenues accumulated and set aside for operation and maintenance, as herein provided; and will make unusual or extraordinary repairs, renewals and replacements, as the same may be required, through application of revenues accumulated and set aside for such purposes.

(D) The District covenants and agrees that, so long as any of the 1999 Bonds are outstanding, it will not sell or otherwise dispose of any of the System facilities or any part thereof, and, except as provided for in this Resolution and in the Prior Resolutions, it will not create or permit to be created any charge or lien on the revenues thereof ranking equal or prior to the charge or lien of the 1999 Bonds. Notwithstanding the foregoing, the District may at any time permanently abandon the use of, or sell at fair market value, any of its System facilities, provided that:

(i) it is in compliance with all covenants and undertakings in connection with all of its bonds then outstanding and payable from the revenues of the System;

(ii) it will, in the event of sale, apply the proceeds to either (1) redemption of outstanding 1999 Bonds or parity bonds in accordance with the provisions governing prepayment of bonds in advance of maturity, or (2) replacement of the facility so disposed of by another facility the revenues of which shall be incorporated into the System as hereinbefore provided;

(iii) it certifies, prior to any abandonment of use, that the facility to be abandoned is no longer economically feasible of producing net revenues; and

(iv) notwithstanding all of the foregoing, no such sale, abandonment or transfer of System facilities shall be made so long as USDA owns any of the 1999 Bonds herein authorized, without the written consent and approval of USDA.

(E) It will establish, enforce and collect rates and charges for services rendered and facilities afforded by the System; and the same shall be reasonable and just, taking into account and consideration the cost and value of the System, the costs of operating the same and maintaining it in a good state of repair, proper and necessary allowances for depreciation and for additions and extensions, and the amounts necessary for the orderly retirement of all outstanding bonds as aforesaid and the accruing interest thereon, and the accumulation of reserves as herein provided; and such rates and charges shall be adequate to meet all such requirements as provided in this Resolution, and shall, if necessary, be adjusted from time to time in order to comply herewith.

On or before the date of issuance of the 1999 Bonds, the District will adopt a Budget of Current Expenses for the System for the remainder of the then current fiscal year of the System, and thereafter, on or before the first day of each fiscal year so long as any 1999 Bonds are outstanding, it will adopt an Annual Budget of Current Expenses for the ensuing fiscal year, and will file a copy of each such Budget, and of any amendments thereto, in the office of the Secretary of the District, and furnish copies thereof to the holder of any Bond upon request. The term "Current Expenses," as herein used, includes all reasonable and necessary costs of operating, repairing, maintaining, and insuring the System, but shall exclude any allowance for depreciation, payments into the Depreciation Fund for extensions, improvements, and extraordinary repairs and maintenance, and payments into the Bond Fund. The District covenants that the Current Expenses incurred in any year will not exceed the reasonable and necessary amounts therefor, and that it will not expend any amount or incur any obligations for operation, maintenance and repairs in excess of the amounts provided for Current Expenses in the Annual Budget, except upon resolution duly adopted by the Commission of the District determining that such expenses are necessary in order to operate and maintain the System. At the same time, and in like manner, the District agrees that it will prepare an estimate of cash income and revenues to be derived from operation of the System for each fiscal year, and to the extent that said cash income and revenues are insufficient to provide for all payments required to be made into the Bond Fund during such ensuing fiscal year, and to make the monthly payments specified by subsection (B) of Section 7 of this Resolution, and to pay Current Expenses, the District covenants and agrees that it will revise its rates and charges for services rendered by the System, so that the same will be adequate to meet all of such requirements.

(F) It will not at any time make any reduction in any prevailing schedule of rates and charges for use of the services and facilities of the System without first obtaining the written determination of a Consulting Engineer of national reputation that the proposed reduction will not adversely affect the ability of the District to meet all the requirements set forth in this Resolution.

(G) It will at all times segregate the revenues of the System from all other revenues, moneys, and funds of the District, and will promptly and regularly make application and

distribution thereof into the special funds provided in the Prior Resolutions, and in this Resolution, in the amount and with due regard for the priorities herein attributed thereto.

(H) It will keep proper books of record and account, separate and clearly distinguishable from all other municipal records and accounts, showing complete and correct entries of all transactions relating to the System, and the same shall be available and open to inspection by any Bondholder, and any agent or representative of a Bondholder.

(I) It will, within ninety (90) days after the end of each fiscal year, cause an audit to be made of the books of record and account pertinent to the System, by an independent state-licensed accountant not in the employ of the District on a monthly salary basis, showing all receipts and disbursements, and reflecting in reasonable detail the financial condition and records of the System, including the status of the several funds hereinbefore created, the status of the insurance and fidelity bonding, the number and type of connections, and the current rates and charges, with comments of the auditor concerning whether the books and records are being kept in compliance with this Resolution and in accordance with recognized accounting practices, and will promptly cause a copy of the Audit Report to be filed in the Office of the Secretary where it will be available for public inspection, and will promptly mail a copy thereof to the original recipients of 1999 Bonds issued hereunder. If requested to do so, the District will furnish to any Bondholder a condensed form of the Balance Sheet, and a condensed form of the Operating Report, in reasonable detail. All expenses incurred in causing such audits to be made, and copies distributed, shall constitute proper expenses of operating and maintaining the System, and may be paid from revenues allocated for such purposes, as herein provided. Provided, so long as USDA holds any of the 1999 Bonds herein authorized, the District shall furnish operating and other financial statements in such form and substance and for such periods as may be requested by USDA.

(J) Any holder of 1999 Bonds may either at law or in equity, by suit, action, mandamus, or other proceedings, enforce and compel performance by said District and its officers and agents of all duties imposed or required by law or this Resolution in connection with the operation of the System, including the making and collecting of sufficient rates and segregation of the revenues and application thereof.

(K) If there be any default in the payment of the principal of or interest on any of the 1999 Bonds, then upon the filing of suit by any holder of said Bonds, any court having jurisdiction of the action may appoint a receiver to administer the System on behalf of the District, with power to charge and collect rates sufficient to provide for the payment of any bonds or obligations outstanding against the System, and for the payment of Current Expenses, and to apply the revenues in conformity with this Resolution and the provisions of said statute laws of Kentucky aforesaid.

(L) The District will cause each municipal officer or other person (other than depository banks) having custody of any moneys administered under the provisions of this Resolution to be bonded at all times in an amount at least equal to the maximum amount of such moneys in his custody at any time; each such bond to have surety given by a surety corporation qualified to do business in Kentucky and approved by the Commission, and the premiums for such surety shall constitute a proper expense of operating the System, and may be paid from moneys available in the Operation and Maintenance Fund.

(M) It will procure, and at all times maintain in force, insurance of all insurable properties constituting parts of, or being appurtenant to, the System to the full insurable value thereof, against damage or destruction by fire, windstorm, and the hazards covered by the standard "extended coverage" policy endorsements or provisions, the premiums therefor to be paid from the Operation and Maintenance Fund; and will deposit all sums collected under the terms of such policies in the Reserve Fund. Such insurance shall be in amounts sufficient to provide for not less than full recovery whenever a loss from perils insured against does not exceed eighty per centum (80%) of the full insurable value of the damaged facility.

(N) The District will procure and at all times maintain Public Liability Insurance relating to the operation of the System, with limits of not less than \$200,000 for one person and \$500,000 for more than one person involved in one accident to protect the District from claims for bodily injury and/or death; and not less than \$100,000 from claims for damage to property of others which may arise from the District's operation of the System.

(O) The District will carry suitable Workmen's Compensation Insurance in accordance with law.

(P) If the District owns or operates a vehicle in the operation of the System, the District will procure and at all times maintain Vehicular Public Liability Insurance with limits of not less than \$200,000 for one person and \$500,000 for more than one person involved in one accident to protect the District from claims for bodily injury and/or death, and not less than \$100,000 against claims for damage to property of others which may arise from the District's operation of vehicles. Provided, notwithstanding (M), (N), (O) and (P) above, that so long as USDA holds any 1999 Bonds, the District will procure and maintain insurance of such types and amounts as USDA may specify.

(Q) So long as USDA is the holder of any bonds of the District, the District shall not issue any bonds or other obligations for the purpose of defeasing or otherwise terminating the lien of such bonds held by USDA without immediately prepaying all of such bonds held by USDA.

## SECTION 9

### PARITY BONDS PERMITTED: TERMS

The 1999 Bonds authorized to be issued hereunder and from time to time outstanding shall not be entitled to priority one over the other in the application of the revenues herein pledged, regardless of the time or times of their issuance, it being the intention that there shall be no priority among the 1999 Bonds authorized to be issued under the provisions of this Resolution, regardless of the fact that they may actually be issued and delivered at different times. No other bonds or other obligations shall be issued by the District and made payable from the income and revenues of the System unless the pledge of revenues for the same is expressly made subordinate and inferior to the lien and pledge herein created; provided, however, the District hereby reserves the right and privilege of issuing additional bonds, from time to time, payable from the revenues of the System, ranking on a basis of equality and parity as to security and source of payment with the 1999 Bonds herein authorized, and the outstanding Prior Bonds, for the following purposes and subject to the following conditions and restrictions:

(A) The District shall have the right to add new System facilities and related auxiliary facilities by the issuance of one or more additional series of bonds to be secured by a parity lien on and ratably payable from the revenues and any other security pledged to the 1999 Bonds, provided in each instance that:

- (i) the facility or facilities to be built from the proceeds of the additional parity bonds is or are made a part of the System and its or their revenues are pledged as additional security for the additional parity bonds and the outstanding Prior Bonds and 1999 Bonds;
- (ii) the District is in compliance with all covenants and undertakings in connection with all of its bonds then outstanding and payable from the income and revenues of the System or any part thereof; and
- (iii) there is procured and filed with the Secretary of the District a statement by an independent certified, public accountant, not in the regular employ of the District on a monthly salary basis, reciting the opinion, based upon reasonable investigation, that the annual net revenues (defined as gross revenues less essential operation and maintenance expenses) of the then existing System for the fiscal year preceding the year of issuance of such additional parity bonds were equal to at least one hundred twenty percent (120%) of the average annual debt service requirements for principal and interest on all Prior Bonds and 1999 Bonds and parity bonds, if any, then outstanding and on the additional parity bonds then to be issued. (The calculation of average annual debt service requirements of principal and interest on the additional bonds to be issued shall, regardless of whether such bonds are to be serial or term bonds, be determined on the basis of the

principal of and interest on such bonds being payable in approximately equal annual installments.) Provided, however, the foregoing conditions and limitations prescribed in this subparagraph (iii) may be waived or modified by the written consent of the holders of at least seventy-five percent (75%) in principal amount of the then outstanding Prior Bonds and 1999 Bonds and any parity bonds.

(B) The District hereby covenants and agrees that in the event additional series of parity bonds are issued, it shall:

- (i) adjust the monthly deposits into the Bond Fund on the same basis as that prescribed in Section 7(A) hereof to reflect the annual debt service on the additional bonds;
- (ii) adjust and increase appropriately the monthly amount to be deposited into the Depreciation Fund to give recognition to the facilities and equipment to be constructed or acquired with the proceeds of such additional bonds; and
- (iii) make such additional bonds payable as to principal on January 1 of each year in which principal falls due and payable as to interest on January 1 and July 1 of each year.

(C) If in any subsequently issued series of bonds secured by a parity lien on the revenues of the System, it is provided that excess revenues in the Revenue Fund shall be used to redeem bonds in advance of scheduled maturity, or if the District at its option undertakes to redeem outstanding bonds in advance of scheduled maturity, it is agreed and understood (a) that calls of bonds will be applied to each series of bonds on an equal pro rata basis (reflecting the proportion of the original amount of each series of bonds outstanding at the time of such call), and (b) that calls of bonds for each series of bonds will be in accordance with the call provisions of the respective bond series. However, the District shall have the right to call, subject to the call provisions of the respective bond series, any or all outstanding bonds which may be called at par prior to calling any bonds that are callable at a premium.

The additional parity bonds (sometimes herein referred to as "permitted" to be issued), the issuance of which is restricted and conditioned by this Section, shall be understood to mean bonds payable from the revenues of the System on a basis of equality and parity with the 1999 Bonds herein specifically authorized, and shall not be deemed to include other bonds or obligations, the security and source of payment of which are subordinate and subject to the priority of the 1999 Bonds and parity bonds herein authorized to be issued. The District expressly reserves the right to issue its bonds or other obligations payable from the revenues herein pledged, and not ranking on a basis of equality and parity with the 1999 Bonds and parity bonds herein otherwise referred to, without any proof of previous earnings or net revenues, but only if such bonds or other obligations are issued to provide for additions or extensions or improvements of the System, and only if the same are issued in express recognition of the priorities, liens and rights

created and existing for the security, source of payment, and protection of the 1999 Bonds and parity bonds herein authorized and permitted to be issued. Provided, however, that nothing in this Section is intended or shall be construed as a restriction upon the ordinary refunding of the 1999 Bonds, and/or of any bonds which may have been issued and are outstanding under any of the provisions of this Resolution, if such refunding does not operate to increase, in any year until the final maturity of the refunding bonds, the aggregate of the principal and interest requirements of the bonds to remain outstanding and the bonds proposed to be refunded.

#### SECTION 10

#### PROVISIONS OF RESOLUTION CONSTITUTE CONTRACT

The provisions of this Resolution shall constitute a contract between the District and the holders of the 1999 Bonds herein authorized and any parity bonds herein permitted to be issued, and after the issuance of any of the 1999 Bonds, no change, variation or alteration of any kind of the provisions of this Resolution shall be made in any manner without the written consent of the holder or holders of the 1999 Bonds, except as herein provided, until such time as all of the 1999 Bonds and parity bonds issued hereunder, and the interest thereon, have been paid in full.

#### SECTION 11

#### STATUTORY MORTGAGE LIEN ACKNOWLEDGED

A statutory mortgage lien upon the System, together with all appurtenances and additions thereto and extensions thereof, and including the revenues thereof, is granted and created by Section 106.080 of the Kentucky Revised Statutes for the benefit and protection of the holders of the 1999 Bonds issued and parity bonds permitted to be issued under authority of this Resolution, and previously issued and outstanding parity bonds, and of the interest payable thereon; and said statutory mortgage lien is hereby recognized and shall be effective upon delivery of any of the 1999 Bonds and shall continue in full force and effect so long as there shall remain unpaid any part of the principal of or interest on the 1999 Bonds and any parity bonds.

#### SECTION 12

#### TAX COVENANTS

The District covenants and agrees that the Project will be constructed expeditiously and the expenditure of the portion of the proceeds of the 1999 Bonds deposited in the Construction Fund for the payment of the costs of the Project will be made promptly in order that the Project will be completed and in operation at the earliest possible date. The District further certifies and covenants with the holders of the 1999 Bonds that so long as any of the 1999 Bonds remain outstanding, moneys on deposit in any fund or account in connection with the 1999 Bonds, whether or not such moneys were derived from the proceeds of the sale of the 1999 Bonds or

from any other sources, will not be invested or used in a manner which will cause the 1999 Bonds to be "arbitrage bonds" within the meaning of Sections 103(b)(2) and 148 of the Internal Revenue Code of 1986, as amended (the "Code"), and any lawful regulations promulgated or proposed thereunder, as the same presently exist or may from time to time hereafter be amended, supplemented or revised. The Chairman and/or Secretary, as the officers of the District charged with the responsibility for issuing the Bonds, are authorized and directed, for and on behalf of the District, to execute all papers, documents, certificates and other instruments that may be required for evidencing compliance with federal "arbitrage bond" regulations, and any representations and certifications contained in such papers, documents, certificates and other instruments so executed shall be deemed to constitute representations and certifications of the District.

The District further represents, warrants, agrees and covenants as follows:

(A) Within the meaning of Section 141 of the Code and the Income Tax Regulations issued thereunder, over the terms of the Bonds (i) less than 10% of the proceeds of the 1999 Bonds, if any, will be applied for any private business use, and the payment of principal or interest on less than 10% of the amount of the 1999 Bonds, if any, will be secured directly or indirectly by any interest in property used for a private business use, or payments in respect of such property, or will be derived directly or indirectly from payments (whether or not to the District) in respect of such property; (ii) at least 90% of the proceeds of the 1999 Bonds will be applied for a governmental use of the District; (iii) any private business use of the Project will be related to such governmental use of the District and will not be unrelated or disproportionate; and (iv) none of the proceeds of the 1999 Bonds will be used, directly or indirectly, to make or finance loans to private persons. It is reasonably expected that over the term of the 1999 Bonds (a) the Project will be available for general public use, in that it will be reasonably available for use by natural persons not engaged in a trade or business on the same basis as any other person or entity, (b) no nongovernmental person will have any special legal entitlement to use the Project, and (c) there will be no direct or indirect payments made with respect to the Project or the security of the 1999 Bonds by any persons or entities other than payments by the general public as described in clause (a) above.

(B) Within the meaning of Section 148(f)(4)(B), it is reasonably expected at least 75% of the net proceeds (including investment proceeds) of the 1999 Bonds will be used for construction expenditures with respect to property which is owned by a governmental unit, at least 10% of such proceeds will be spent for the governmental purposes of the issue within six months from the date the 1999 Bonds are issued, at least 45% of such proceeds will be spent for such purposes within one year from such date, at least 75% of such proceeds will be spent for such purposes within eighteen months from such date, and at least 100% of such proceeds will be spent within two years from such date. It is also reasonably expected at least 50% of all proceeds (including investment proceeds) of the Bonds will be used for expenditures on the Project within six months, at least 60% will be so used within 12 months and 100% will be so used within 18 months from the date of issuance of the 1999 Bonds. If for any reason the arbitrage rebate requirements of Section 148(f) of the Code should be deemed to apply to the 1999 Bonds, the District will take all action necessary to comply therewith.

(C) It is reasonably expected that during the term of the 1999 Bonds the Project will not be disposed of, provided, however, should there be any disposition of any personal property constituting a part of the Project because it is no longer suitable for its governmental purpose, it is reasonably expected that the fair market value of such personal property will not exceed 25% of its cost.

(D) The weighted average maturity of the 1999 Bonds does not exceed 120% of the weighted average useful life of the facilities comprising the Project.

(E) The District has not heretofore expended any sums on the Project which are to be reimbursed from the proceeds of the 1999 Bonds, other than (a) certain preliminary expenditures such as engineering and planning costs not exceeding 20% of the 1999 Bond proceeds, (b) expenditures made within 60 days prior to the date of adoption of this Resolution, and (c) expenditures prior to which the District had adopted an official intent resolution regarding reimbursement from tax-exempt bond proceeds.

(F) The 1999 Bonds are not federally guaranteed within the meaning of Section 149(b) of the Code.

(G) The District will comply with the information reporting requirements of Section 149(e) of the Code.

(H) The District will not use or permit the use of any of the funds provided by the 1999 Bonds in such manner as to, or take or omit to take any action which would, impair the exclusion from gross income for federal income tax purposes of interest on the 1999 Bonds. The District shall at all times do and perform all acts and things permitted by law and necessary or desirable in order to assure that interest paid by the District on the 1999 Bonds shall, for the purposes of federal income taxation, be excludable from gross income.

(I) This Resolution is intended to and does constitute, in part, a declaration of official intent under applicable Income Tax Regulations.

### SECTION 13

#### SEVERABILITY CLAUSE

If any section, paragraph, clause or provision of this Resolution shall be held invalid, the invalidity of such section, paragraph, clause or provision shall not affect any of the remaining provisions of this Resolution.

SECTION 14

REPEAL OF INCONSISTENT PROVISIONS

All resolutions and orders, or parts thereof, in conflict with the provisions of this Resolution are, to the extent of such conflict, hereby repealed.

SECTION 15

WHEN RESOLUTION EFFECTIVE

This Resolution shall be in full force and effect from and after its adoption, approval and attestation as provided by law.

ADOPTED BY THE COMMISSION OF THE GRAYSON COUNTY WATER DISTRICT, GRAYSON COUNTY, KENTUCKY, at a meeting held on the \_\_\_ day of \_\_\_\_\_, 1999, on the same occasion signed by the Chairman, attested under seal by the Secretary, and declared to be in full force and effect.

(SEAL)

\_\_\_\_\_  
Chairman of the Commission

ATTEST:

\_\_\_\_\_  
Secretary

CERTIFICATION

The undersigned, Secretary of the Commission of Grayson County Water District, Grayson County, Kentucky, hereby certifies that the foregoing is a true, complete and correct copy of a Resolution adopted by the Commission of said District, signed by the Chairman thereof, and attested by me as Secretary upon the occasion of a properly convened meeting of the Commission of said District held on the \_\_\_ day of \_\_\_\_\_, 1999, as shown by the official records in my custody and under my control.

WITNESS my hand this \_\_\_ day of \_\_\_\_\_, 1999.

\_\_\_\_\_  
Secretary



March 15, 1999

Mr. Ed Nichols, Chairman  
Grayson County Water District  
P.O. Box 217  
Leitchfield, Kentucky 42755

Dear Mr. Nichols:

This letter establishes conditions which must be understood and agreed to by you before further consideration may be given to the application. The loan and/or grant will be administered on behalf of the Rural Utilities Service (RUS) by the State and Area office staff of USDA, Rural Development. Any changes in project cost, source of funds, scope of services or any other significant changes in the project or applicant must be reported to and approved by USDA, Rural Development, by written amendment to this letter. Any changes not approved by Rural Development shall be cause for discontinuing processing of the application. It should also be understood that Rural Development is under no obligation to provide additional funds to meet an overrun in construction costs.

This letter is not to be considered as loan and/or grant approval or as a representation as to the availability of funds. The docket may be completed on the basis of a RUS loan not to exceed \$1,000,000, a RUS grant not to exceed \$500,000, and a Kentucky State Surplus grant in the amount of \$500,000.

If Rural Development makes the loan, you may make a written request that the interest rate be the lower of the rate in effect at the time of loan approval or the time of loan closing. If you do not request the lower of the two interest rates, the interest rate charged will be the rate in effect at the time of loan approval. The loan will be considered approved on the date a signed copy of Form RD 1940-1, "Request for Obligation of Funds," is mailed to you. If you want the lower of the two rates, your written request should be submitted to Rural Development as soon as practical. In order to avoid possible delays in loan closing, such a request should ordinarily be submitted at least 30 days before loan closing.

Please complete and return the attached Form RD 1942-46, "Letter of Intent to Meet Conditions," if you desire that further consideration be given to your application.

The "Letter of Intent to Meet Conditions" must be executed within three weeks from the date of this letter or it becomes invalid unless a time extension is granted by Rural Development.

If the conditions set forth in this letter are not met within 240 days from the date hereof, Rural Development reserves the right to discontinue the processing of the application.

In signing Form RD 1942-46, you are agreeing to complete the following as expeditiously as possible:

1. Number of Users and Their Contribution:

There shall be 4,307 water users, of which 4,085 are existing users and 222 are new users contributing \$50,000 in connection fees toward the cost of the project. The connection fees will be collected prior to advertising for construction bids and will be placed in the construction account at loan pre-closing, unless spent for authorized purposes prior to loan pre-closing. The Rural Development Manager will review and authenticate the number of users and amount of connection fees prior to advertising for construction bids.

1a. Grant Agreement:

Attached is a copy of RUS Bulletin 1780-12, "Water and Waste System Grant Agreement," for your review. You will be required to execute a completed form at the time of grant closing.

1b. Drug-Free Work Place:

Prior to grant approval, the Water District will be required to execute Form AD-1049, "Certification Regarding Drug-Free Workplace Requirements (Grants) Alternative I - For Grantees Other Than Individuals."

2. Repayment Period:

The loan will be scheduled for repayment over a period not to exceed 40 years from the date of the bond. Principal payment will not be deferred for a period in excess of two (2) years from the date of the bond. Payments will be in accordance with applicable KRS which requires interest to be paid semi-annually (July 1st and January 1st) and principal will be due on or before the first of January. Rural Development may require the Water District to adopt a supplemental payment agreement providing for monthly payments of principal and interest so long as the bond is held or insured by RUS. Monthly payments will be approximate amortized installments.

Rural Development encourages the use of the Preauthorized Debit (PAD) payment process, which authorizes the electronic withdrawal of funds from your bank account on the exact installment payment due date (contact the Rural Development Manager for further information).

3. Funded Depreciation Reserve Account:

The Water District will be required to deposit \$465.00 per month into a "Funded Depreciation Reserve Account". The monthly deposits are for the life of the loan.

The required deposits to the Reserve Account are in addition to the requirements of the Water District's prior bond resolutions.

The monthly deposits to the Reserve Account are required to commence the first full fiscal year after the facility becomes operational.

4. Security Requirements:

A pledge of gross water revenue will be provided in the Bond Resolution. Bonds shall rank on a parity with existing bonds.

5. Land Rights and Real Property:

The Water District will be required to furnish satisfactory title, easements, etc., necessary to install, maintain and operate the facility to serve the intended users. The pipelines will be on private rights-of-way where feasible. Easements and options are to be secured prior to advertising for construction bids.

6. Organization:

The Water District will be legally organized under applicable KRS which will permit them to perform this service, borrow and repay money.

7. Business Operations:

The Water District will be required to operate the system under a well-established set of resolutions, rules and regulations. A budget must be established annually and adopted by the Water District after review by Rural Development. At no later than loan pre-closing, the Water District will be required to furnish a prior approved management plan to include, as a minimum, provisions for management, maintenance, meter reading, miscellaneous services, billing, collecting, bookkeeping, making and delivering required reports and audits.

8. Accounts, Records and Audits:

The Water District will be required to maintain adequate records and accounts and submit statistical and financial reports in accordance with subsection 1780.47 of RUS Instruction 1780 and RUS Staff Instruction 1780-4, a copy of which is enclosed. The enclosed audit booklet will be used as a guide for preparation of audits.

9. Accomplish Audits for Years in Which Federal Financial Assistance is Received:

The Water District will accomplish audits in accordance with OMB Circular A-133, during the years in which federal funds are received. The Water District will provide copies of the audits to the Area Office and the appropriate Federal cognizant agency as designated by OMB Circular A-133.

10. Insurance and Bonding:

The following insurance and bonding will be required:

- A. Adequate Liability and Property Damage Insurance including vehicular coverage, if applicable, must be obtained and maintained by the Water District. The Water District should obtain amounts of coverage as recommended by its attorney, consulting engineer and/or insurance provider.
- B. Worker's Compensation - The Water District will carry worker's compensation insurance for employees in accordance with applicable state laws.
- C. Fidelity Bond - The Water District will provide Fidelity Bond Coverage for all persons who have access to funds. Coverage may be provided either for all individual positions or persons, or through "blanket" coverage providing protection for all appropriate employees and/or officials. The amount of coverage required for all RUS loans is \$486,000.
- D. Real Property Insurance - The Water District will obtain and maintain adequate fire and extended coverage on all structures including major items of equipment or machinery located in the structures. The amounts of coverage should be based on recommendations obtained by the Water District from its attorney, consulting engineer and/or insurance provider. Subsurface lift stations do not have to be covered except for the value of electrical and pumping equipment therein.
- E. Flood Insurance - The Water District will obtain and maintain adequate coverage on any facilities located in a special flood and mudslide prone areas.

11. Planning and Performing Development:

- A. The engineer should not be authorized to commence work on final plans and specifications until a determination has been made that the project can be planned and constructed within the estimated cost shown in paragraph "20" of this letter. The engineer may then proceed to develop final plans and specifications to be completed no later than 210 days from this date, and prepare bid documents. The Rural Development Manager is prepared to furnish the necessary guide for him to follow so as to keep the project plans and documents within our guidelines and requirements. The project should not be advertised for construction bids until all easements and enforceable options have been obtained, and total funds are committed or available for the project.

B. The following documents will be submitted to Rural Development for review and must be concurred in by Rural Development prior to advertisement for construction bids:

1. Final plans, specifications and bid documents.
2. Applicant's letter on efforts to encourage small business and minority-owned business participation.
3. Legal Service Agreements.
4. Engineering Agreements.

Revision in these documents will be subject to Rural Development concurrence. Any agreements, contracts, etc. not reviewed and approved by Rural Development will not be eligible for payment from project funds or revenues from facilities financed by this Agency.

Prior to receipt of an authorization to advertise for construction bids, the Water District will obtain advance clearance from Bond Counsel regarding compliance with KRS 424 pertaining to publishing of the advertisement for construction bids in local newspapers and the period of time the notice is required to be published.

12. Compliance with Section 504 of the Rehabilitation Act of 1973:

The Water District will be required to comply with Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), in order to make sure no handicapped individual, solely by reason of their handicap, is excluded from participation in the use of the water system, be denied the benefits of the water system, or be subjected to discrimination.

13. Closing Instructions:

The Office of General Counsel, our Regional Attorney, will be required to write closing instructions in connection with this loan. Conditions listed therein must be met by the Water District.

14. Compliance with Special Laws and Regulations:

The Water District will be required to conform with any and all state and local laws and regulations affecting this type project.

15. System Operator:

The Water District is reminded that the system operator must have an Operator's Certificate issued by the State.

16. Prior to Pre-Closing the Loan, the Water District will be Required to Adopt:

- A. Form RD 1942-47, "Association Loan Resolution (Public Body)."
- B. Form RD 400-1, "Equal Opportunity Agreement."
- C. Form RD 400-4, "Assurance Agreement."
- D. Form AD-1047, "Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transaction."
- E. Form RD 1910-11, "Applicant Certification Federal Collection Policies for Consumer or Commercial Debts."
- F. FmHA Instruction 1940-Q, Exhibit A-1, "Certification for Contracts, Grants and Loans."

The Water District must offer the opportunity for all residents in the service area to become users of the facilities regardless of race, creed, color, religion, sex, national origin, marital status, physical or mental handicap or level of income.

17. Refinancing and Graduation Requirements:

The Water District is reminded that if at any time it shall appear to the Government that the Water District is able to refinance the amount of the RUS indebtedness then outstanding, in whole or in part, by obtaining a loan from commercial sources at reasonable rates and terms, upon the request of the Government, the Water District will apply for and accept such loan in sufficient amount to repay the Government.

18. Commercial Interim Financing:

The Water District will be required to use commercial interim financing for the project during construction for the RUS loan portion of the financing, if available at reasonable rates and terms.

Before the loan is closed, the Water District will be required to provide Rural Development with statements from the contractor, engineer and attorneys that they have been paid to date in accordance with their contract or other agreements and, in the case of the contractor, that he has paid his suppliers and sub-contractors.

19. Disbursement of Project Funds:

A construction account for the purpose of disbursement of project funds (RUS) will be established by the Water District prior to start of construction. The position of officials entrusted with the receipt and disbursement of RUS project funds will be covered by a "Fidelity Bond," with USDA-Rural Development as Co-Obligee, in the amount of construction funds on hand at any one time during the construction phase.

During construction, the Water District shall disburse project funds in a manner consistent with subsection 1780.76 (e) of RUS Instruction 1780. Form RD 1924-18, "Partial Payment Estimate," or similar form approved by Rural Development, shall be used for the purpose of documenting periodic construction estimates, and shall be submitted to Rural Development for review and acceptance. Prior to disbursement of funds by the Water District, the Board of Directors shall review and approve each payment estimate. All bills and vouchers must be approved by Rural Development prior to payment by the Water District.

Form RD 440-11, "Estimate of Funds Needed for 30-Day Period Commencing \_\_\_\_\_," will be prepared by the Water District and submitted to Rural Development in order that a periodic advance of federal cash may be requested.

Monthly audits of the Water District's construction account records shall be made by Rural Development.

20. Cost of Facility:

Breakdown of Costs:

Development	\$ 1,687,000
Land and Rights	15,000
Legal and Administrative	32,500
Engineering	166,500
Interest	47,000
Contingencies	<u>102,000</u>
TOTAL	\$ 2,050,000

Financing:

RUS Loan	\$ 1,000,000
RUS Grant	500,000
Kentucky State Surplus Grant	500,000
Applicant Contribution	<u>50,000</u>
TOTAL	\$ 2,050,000

21. Use of Remaining Project Funds:

The applicant contribution shall be considered as the first funds expended. After providing for all authorized costs, any remaining project funds will be considered to be RUS/State grant funds and refunded in proportion to participation in the project. If the amount of unused grant funds exceeds the grants, that part would be RUS loan funds.

*Handwritten notes:*  
 need  
 Eng

22. Rates and Charges:

Rates and charges for facilities and services rendered by the Water District must be at least adequate to meet cost of maintaining, repairing and operating the water system and meeting required principal and interest payments and the required deposits to debt service and/or depreciation reserve.

Water rates will be at least:

5/8 x 3/4 - Inch Meter

First	1,500	gallons @ \$	12.75 - Minimum Bill.
Next	8,500	gallons @ \$	5.64 - per 1,000 gallons.
Next	40,000	gallons @ \$	4.65 - per 1,000 gallons.
Next	100,000	gallons @ \$	3.88- per 1,000 gallons.
All Over	150,000	gallons @ \$	3.11 - per 1,000 gallons.

3/4 - Inch Meter

First	3,000	gallons @ \$	21.66 - Minimum Bill.
Next	7,000	gallons @ \$	5.64 - per 1,000 gallons.
Next	40,000	gallons @ \$	4.65 - per 1,000 gallons.
Next	100,000	gallons @ \$	3.88- per 1,000 gallons.
All Over	150,000	gallons @ \$	3.11 - per 1,000 gallons.

1 - Inch Meter

First	5,000	gallons @ \$	33.41 - Minimum Bill.
Next	5,000	gallons @ \$	5.64 - per 1,000 gallons.
Next	40,000	gallons @ \$	4.65 - per 1,000 gallons.
Next	100,000	gallons @ \$	3.88- per 1,000 gallons.
All Over	150,000	gallons @ \$	3.11 - per 1,000 gallons.

1 1/2 - Inch Meter

First	10,000	gallons @ \$	67.18 - Minimum Bill.
Next	40,000	gallons @ \$	4.65 - per 1,000 gallons.
Next	100,000	gallons @ \$	3.88 - per 1,000 gallons.
All Over	150,000	gallons @ \$	3.11 - per 1,000 gallons.

2 - Inch Meter

First	16,000	gallons @ \$	94.96 - Minimum Bill.
Next	34,000	gallons @ \$	4.65 - per 1,000 gallons.
Next	100,000	gallons @ \$	3.88- per 1,000 gallons.
All Over	150,000	gallons @ \$	3.11 - per 1,000 gallons.

3 - Inch Meter

First	30,000	gallons @ \$	186.69 - Minimum Bill.
Next	20,000	gallons @ \$	4.65 - per 1,000 gallons.
Next	100,000	gallons @ \$	3.88- per 1,000 gallons.
All Over	150,000	gallons @ \$	3.11 - per 1,000 gallons.

4 - Inch Meter

First	50,000	gallons @ \$	285.20 - Minimum Bill.
Next	100,000	gallons @ \$	3.88- per 1,000 gallons.
All Over	150,000	gallons @ \$	3.11 - per 1,000 gallons.

6 - Inch Meter

First	100,000	gallons @ \$	529.41 - Minimum Bill.
Next	50,000	gallons @ \$	3.88- per 1,000 gallons.
All Over	150,000	gallons @ \$	3.11 - per 1,000 gallons.

8 - Inch Meter

First	160,000	gallons @ \$	800.95 - Minimum Bill.
All Over	160,000	gallons @ \$	3.11 - per 1,000 gallons.

10 - Inch Meter

First	550,500	gallons @ \$	2,040.79 - Minimum Bill.
All Over	550,000	gallons @ \$	3.11 - per 1,000 gallons.

23. Water Purchase Contract:

The Water District will submit a Water Purchase Contract for approval by Rural Development before advertising for construction bids. If the contract is not on Form RD 442-30, "Water Purchase Contract," the contract will require approval by our Regional Attorney. The contract must meet the requirements of subsection 1780.62 of RUS Instruction 1780.

24. Commitment of State of Kentucky Surplus Grant:

This Letter of Conditions is issued contingent upon a firm commitment being in effect prior to advertising for construction bids for the State of Kentucky Surplus Grant in the amount of \$500,000.

25. Floodplain Construction:

The Water District will be required to pass and adopt a Resolution or amend its By-Laws whereby the Water District will deny any water service to any future customer wishing to build on or develop property located within a designated floodplain. If a customer or developer requests service for construction in a designated floodplain, the customer or developer must provide evidence and a justification for approval by the Water District and Rural Development officials that there are no other alternatives to construction or development within the designated floodplain. The community must be a participant in the National Flood Insurance Program (NFIP) and the customer or developer must obtain the required permits prior to the tap on restrictions being waived.

26. Final Approval Conditions:

Final approval of this loan will depend on your willingness, with the assistance of all your co-workers, to meet the conditions of this letter in an orderly and systematic manner. Then too, final approval will depend on funds being available.

If you desire to proceed with your application, the Rural Development Manager will allot a reasonable portion of his time to provide guidance in application processing.

Sincerely,



THOMAS G. FERN  
State Director  
Rural Development

Enclosures

- cc: Rural Development Manager - Columbia, Kentucky
- Community Development Manager - Elizabethtown, Kentucky
- Lincoln Trail ADD - Elizabethtown, Kentucky
- ✓ Harper, Ferguson & Davis - Louisville, Kentucky
- Robert D. Merideth - Leitchfield, Kentucky
- HMB - Frankfort, Kentucky
- PSC - ATTN: Claude Rhorer - Frankfort, Kentucky



United States  
Department of  
Agriculture

Rural  
Development

77 Corporate Drive, Suite 200  
Lexington, KY 40503-5477  
(606) 224-7336 TTY (606) 224-7422

March 25, 1999

William W Davis  
Harper Ferguson & Davis  
1730 Meidinger Tower  
462 S Fourth Ave  
Louisville KY 40202-3413

Re: Grayson County Water District  
\$1,000,000 Bond Issue

Dear Mr. Davis:

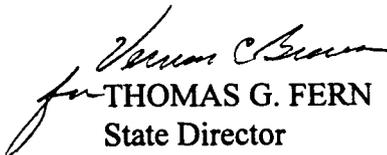
We are enclosing the Maturity Schedule for the referenced Bond Issue. The required deposits to the Funded Depreciation Reserve Account are \$465.00 per month for the life of the loan. The Rural Development loan of \$1,000,000 was approved at an interest rate of 4.5%.

We are attempting to obtain the Regional Attorney's Closing Instructions at an earlier date in an effort to avoid delays in scheduling bond sales and pre-closing. Hopefully, you will be able to draft the bond authorizing documents at such a time to coincide with the Advertisement for Construction Bids. We plan to request Closing Instructions at the same time we authorize the District to advertise for construction bids.

Please provide this office with two copies of the proposed documents and forward one copy to the Rural Development Area Office.

Please let us know if you have any questions.

Sincerely,

  
THOMAS G. FERN  
State Director  
Rural Development

Enclosure

cc: Rural Development Manager - Columbia, Kentucky  
HMB, Inc. - Frankfort, Kentucky

Rural Development is an Equal Opportunity Lender.  
Complaints of discrimination should be sent to:  
Secretary of Agriculture, Washington, D.C. 20250

BORROWER NAME: GRAYSON COUNTY WATER DISTRICT  
 INTEREST RATE: 4.5  
 PRINCIPAL: 1,000,000  
 March 25, 1999

year	period	number	payment	interest	principal	balance
2000	1	1	45,000.00	45,000.00	0	1,000,000
2001	1	2	45,000.00	45,000.00	0	1,000,000
2002	1	3	55,000.00	45,000.00	10,000	990,000
2003	1	4	55,550.00	44,550.00	11,000	979,000
2004	1	5	55,055.00	44,055.00	11,000	968,000
2005	1	6	55,560.00	43,560.00	12,000	956,000
2006	1	7	55,020.00	43,020.00	12,000	944,000
2007	1	8	55,480.00	42,480.00	13,000	931,000
2008	1	9	54,895.00	41,895.00	13,000	918,000
2009	1	10	55,310.00	41,310.00	14,000	904,000
2010	1	11	55,680.00	40,680.00	15,000	889,000
2011	1	12	55,005.00	40,005.00	15,000	874,000
2012	1	13	55,330.00	39,330.00	16,000	858,000
2013	1	14	55,610.00	38,610.00	17,000	841,000
2014	1	15	54,845.00	37,845.00	17,000	824,000
2015	1	16	56,080.00	37,080.00	19,000	805,000
2016	1	17	55,225.00	36,225.00	19,000	786,000
2017	1	18	55,370.00	35,370.00	20,000	766,000
2018	1	19	55,470.00	34,470.00	21,000	745,000
2019	1	20	55,525.00	33,525.00	22,000	723,000
2020	1	21	55,535.00	32,535.00	23,000	700,000
2021	1	22	55,500.00	31,500.00	24,000	676,000
2022	1	23	55,420.00	30,420.00	25,000	651,000
2023	1	24	55,295.00	29,295.00	26,000	625,000
2024	1	25	55,125.00	28,125.00	27,000	598,000
2025	1	26	55,910.00	26,910.00	29,000	569,000
2026	1	27	55,605.00	25,605.00	30,000	539,000
2027	1	28	55,255.00	24,255.00	31,000	508,000
2028	1	29	55,860.00	22,860.00	33,000	475,000
2029	1	30	55,375.00	21,375.00	34,000	441,000
2030	1	31	55,845.00	19,845.00	36,000	405,000
2031	1	32	55,225.00	18,225.00	37,000	368,000
2032	1	33	55,560.00	16,560.00	39,000	329,000
2033	1	34	55,805.00	14,805.00	41,000	288,000
2034	1	35	54,960.00	12,960.00	42,000	246,000
2035	1	36	56,070.00	11,070.00	45,000	201,000
2036	1	37	56,045.00	9,045.00	47,000	154,000
2037	1	38	56,930.00	6,930.00	50,000	104,000
2038	1	39	55,680.00	4,680.00	51,000	53,000
2039	1	40	55,385.00	2,385.00	53,000	0

1,000,000



United States  
Department of  
Agriculture

Rural  
Development

7 Corporate Drive, Suite 200  
Lexington, KY 40503-5477  
(606) 224-7336 TTY (606) 224-7422

March 15, 1999

Mr. Ed Nichols, Chairman  
Grayson County Water District  
P.O. Box 217  
Leitchfield, Kentucky 42755

RECEIVED

SEP 27 1999

PUBLIC SERVICE  
COMMISSION

Dear Mr. Nichols:

This letter establishes conditions which must be understood and agreed to by you before further consideration may be given to the application. The loan and/or grant will be administered on behalf of the Rural Utilities Service (RUS) by the State and Area office staff of USDA, Rural Development. Any changes in project cost, source of funds, scope of services or any other significant changes in the project or applicant must be reported to and approved by USDA, Rural Development, by written amendment to this letter. Any changes not approved by Rural Development shall be cause for discontinuing processing of the application. It should also be understood that Rural Development is under no obligation to provide additional funds to meet an overrun in construction costs.

This letter is not to be considered as loan and/or grant approval or as a representation as to the availability of funds. The docket may be completed on the basis of a RUS loan not to exceed \$1,000,000, a RUS grant not to exceed \$500,000, and a Kentucky State Surplus grant in the amount of \$500,000.

*4.59%  
at present*

If Rural Development makes the loan, you may make a written request that the interest rate be the lower of the rate in effect at the time of loan approval or the time of loan closing. If you do not request the lower of the two interest rates, the interest rate charged will be the rate in effect at the time of loan approval. The loan will be considered approved on the date a signed copy of Form RD 1940-1, "Request for Obligation of Funds," is mailed to you. If you want the lower of the two rates, your written request should be submitted to Rural Development as soon as practical. In order to avoid possible delays in loan closing, such a request should ordinarily be submitted at least 30 days before loan closing.

Please complete and return the attached Form RD 1942-46, "Letter of Intent to Meet Conditions," if you desire that further consideration be given to your application.

The "Letter of Intent to Meet Conditions" must be executed within three weeks from the date of this letter or it becomes invalid unless a time extension is granted by Rural Development.

ENGINEERS • ARCHITECTS • PLANNERS

**Larry Cann**

Project Manager



Haworth, Meyer & Boleyn Inc.

---

3 HMB Circle  
U.S. 460  
Frankfort, KY 40601

(502) 695-9800  
Fax: (502) 695-9810

---

If the conditions set forth in this letter are not met within 240 days from the date hereof, Rural Development reserves the right to discontinue the processing of the application.

In signing Form RD 1942-46, you are agreeing to complete the following as expeditiously as possible:

1. Number of Users and Their Contribution:

There shall be 4,307 water users, of which 4,085 are existing users and 222 are new users contributing \$50,000 in connection fees toward the cost of the project. The connection fees will be collected prior to advertising for construction bids and will be placed in the construction account at loan pre-closing, unless spent for authorized purposes prior to loan pre-closing. The Rural Development Manager will review and authenticate the number of users and amount of connection fees prior to advertising for construction bids.

1a. Grant Agreement:

Attached is a copy of RUS Bulletin 1780-12, "Water and Waste System Grant Agreement," for your review. You will be required to execute a completed form at the time of grant closing.

1b. Drug-Free Work Place:

Prior to grant approval, the Water District will be required to execute Form AD-1049, "Certification Regarding Drug-Free Workplace Requirements (Grants) Alternative I - For Grantees Other Than Individuals."

\*  
Get to Kevin

2. Repayment Period:

The loan will be scheduled for repayment over a period not to exceed 40 years from the date of the bond. Principal payment will not be deferred for a period in excess of two (2) years from the date of the bond. Payments will be in accordance with applicable KRS which requires interest to be paid semi-annually (July 1st and January 1st) and principal will be due on or before the first of January. Rural Development may require the Water District to adopt a supplemental payment agreement providing for monthly payments of principal and interest so long as the bond is held or insured by RUS. Monthly payments will be approximate amortized installments.

Rural Development encourages the use of the Preauthorized Debit (PAD) payment process, which authorizes the electronic withdrawal of funds from your bank account on the exact installment payment due date (contact the Rural Development Manager for further information).

3. Funded Depreciation Reserve Account:

The Water District will be required to deposit \$465.00 per month into a "Funded Depreciation Reserve Account". The monthly deposits are for the life of the loan.

The required deposits to the Reserve Account are in addition to the requirements of the Water District's prior bond resolutions.

The monthly deposits to the Reserve Account are required to commence the first full fiscal year after the facility becomes operational.

4. Security Requirements:

A pledge of gross water revenue will be provided in the Bond Resolution. Bonds shall rank on a parity with existing bonds.

5. Land Rights and Real Property:

The Water District will be required to furnish satisfactory title, easements, etc., necessary to install, maintain and operate the facility to serve the intended users. The pipelines will be on private rights-of-way where feasible. Easements and options are to be secured prior to advertising for construction bids.

6. Organization:

The Water District will be legally organized under applicable KRS which will permit them to perform this service, borrow and repay money.

7. Business Operations:

*Plan of O&M*

The Water District will be required to operate the system under a well-established set of resolutions, rules and regulations. A budget must be established annually and adopted by the Water District after review by Rural Development. At no later than loan pre-closing, the Water District will be required to furnish a prior approved management plan to include, as a minimum, provisions for management, maintenance, meter reading, miscellaneous services, billing, collecting, bookkeeping, making and delivering required reports and audits.

8. Accounts, Records and Audits:

The Water District will be required to maintain adequate records and accounts and submit statistical and financial reports in accordance with subsection 1780.47 of RUS Instruction 1780 and RUS Staff Instruction 1780-4, a copy of which is enclosed. The enclosed audit booklet will be used as a guide for preparation of audits.

9. Accomplish Audits for Years in Which Federal Financial Assistance is Received:

The Water District will accomplish audits in accordance with OMB Circular A-133, during the years in which federal funds are received. The Water District will provide copies of the audits to the Area Office and the appropriate Federal cognizant agency as designated by OMB Circular A-133.

10. Insurance and Bonding:

The following insurance and bonding will be required:

- A. Adequate Liability and Property Damage Insurance including vehicular coverage, if applicable, must be obtained and maintained by the Water District. The Water District should obtain amounts of coverage as recommended by its attorney, consulting engineer and/or insurance provider.
- B. Worker's Compensation - The Water District will carry worker's compensation insurance for employees in accordance with applicable state laws.
- C. Fidelity Bond - The Water District will provide Fidelity Bond Coverage for all persons who have access to funds. Coverage may be provided either for all individual positions or persons, or through "blanket" coverage providing protection for all appropriate employees and/or officials. The amount of coverage required for all RUS loans is \$486,000.
- D. Real Property Insurance - The Water District will obtain and maintain adequate fire and extended coverage on all structures including major items of equipment or machinery located in the structures. The amounts of coverage should be based on recommendations obtained by the Water District from its attorney, consulting engineer and/or insurance provider. Subsurface lift stations do not have to be covered except for the value of electrical and pumping equipment therein.
- E. Flood Insurance - The Water District will obtain and maintain adequate coverage on any facilities located in a special flood and mudslide prone areas.

11. Planning and Performing Development:

\* March 19, 1999

- A. The engineer should not be authorized to commence work on final plans and specifications until a determination has been made that the project can be planned and constructed within the estimated cost shown in paragraph "20" of this letter. The engineer may then proceed to develop final plans and specifications to be completed no later than 210 days from this date, and prepare bid documents. The Rural Development Manager is prepared to furnish the necessary guide for him to follow so as to keep the project plans and documents within our guidelines and requirements. The project should not be advertised for construction bids until all easements and enforceable options have been obtained, and total funds are committed or available for the project.

B. The following documents will be submitted to Rural Development for review and must be concurred in by Rural Development prior to advertisement for construction bids:

1. Final plans, specifications and bid documents.
2. Applicant's letter on efforts to encourage small business and minority-owned business participation.
3. Legal Service Agreements.
4. Engineering Agreements.

Get copy  
to Kevin



Revision in these documents will be subject to Rural Development concurrence. Any agreements, contracts, etc. not reviewed and approved by Rural Development will not be eligible for payment from project funds or revenues from facilities financed by this Agency.

Prior to receipt of an authorization to advertise for construction bids, the Water District will obtain advance clearance from Bond Counsel regarding compliance with KRS 424 pertaining to publishing of the advertisement for construction bids in local newspapers and the period of time the notice is required to be published.

Bill Davis

12. Compliance with Section 504 of the Rehabilitation Act of 1973:

The Water District will be required to comply with Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), in order to make sure no handicapped individual, solely by reason of their handicap, is excluded from participation in the use of the water system, be denied the benefits of the water system, or be subjected to discrimination.

13. Closing Instructions:

The Office of General Counsel, our Regional Attorney, will be required to write closing instructions in connection with this loan. Conditions listed therein must be met by the Water District.

14. Compliance with Special Laws and Regulations:

The Water District will be required to conform with any and all state and local laws and regulations affecting this type project.

15. System Operator:

The Water District is reminded that the system operator must have an Operator's Certificate issued by the State.

Bring to April 24 M/S  
Get copies to Kern  
Cinda said she would

Prior to Pre-Closing the Loan, the Water District will be Required to Adopt:

- A. Form RD 1942-47, "Association Loan Resolution (Public Body)."
- B. Form RD 400-1, "Equal Opportunity Agreement."
- C. Form RD 400-4, "Assurance Agreement."
- D. ✓ Form AD-1047, "Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transaction." #23
- E. Form RD 1910-11, "Applicant Certification Federal Collection Policies for Consumer or Commercial Debts."
- F. #49 FmHA Instruction 1940-Q, Exhibit A-1, "Certification for Contracts, Grants and Loans."

The Water District must offer the opportunity for all residents in the service area to become users of the facilities regardless of race, creed, color, religion, sex, national origin, marital status, physical or mental handicap or level of income.

17. Refinancing and Graduation Requirements:

The Water District is reminded that if at any time it shall appear to the Government that the Water District is able to refinance the amount of the RUS indebtedness then outstanding, in whole or in part, by obtaining a loan from commercial sources at reasonable rates and terms, upon the request of the Government, the Water District will apply for and accept such loan in sufficient amount to repay the Government.

18. Commercial Interim Financing:

The Water District will be required to use commercial interim financing for the project during construction for the RUS loan portion of the financing, if available at reasonable rates and terms.

Before the loan is closed, the Water District will be required to provide Rural Development with statements from the contractor, engineer and attorneys that they have been paid to date in accordance with their contract or other agreements and, in the case of the contractor, that he has paid his suppliers and sub-contractors.

19. Disbursement of Project Funds:

A construction account for the purpose of disbursement of project funds (RUS) will be established by the Water District prior to start of construction. The position of officials entrusted with the receipt and disbursement of RUS project funds will be covered by a "Fidelity Bond," with USDA-Rural Development as Co-Obligee, in the amount of construction funds on hand at any one time during the construction phase.

Local?  
KRW?

Get estimate by pre-closing

During construction, the Water District shall disburse project funds in a manner consistent with subsection 1780.76 (e) of RUS Instruction 1780. Form RD 1924-18, "Partial Payment Estimate," or similar form approved by Rural Development, shall be used for the purpose of documenting periodic construction estimates, and shall be submitted to Rural Development for review and acceptance. Prior to disbursement of funds by the Water District, the Board of Directors shall review and approve each payment estimate. All bills and vouchers must be approved by Rural Development prior to payment by the Water District.

Form RD 440-11, "Estimate of Funds Needed for 30-Day Period Commencing \_\_\_\_\_," will be prepared by the Water District and submitted to Rural Development in order that a periodic advance of federal cash may be requested.

Monthly audits of the Water District's construction account records shall be made by Rural Development.

20. Cost of Facility:

Breakdown of Costs:

Development	\$ 1,687,000
Land and Rights	15,000
Legal and Administrative	32,500
Engineering	166,500
Interest	47,000
Contingencies	<u>102,000</u>
TOTAL	\$ 2,050,000

Financing:

RUS Loan	\$ 1,000,000
RUS Grant	500,000
Kentucky State Surplus Grant	500,000
Applicant Contribution	<u>50,000</u>
TOTAL	\$ 2,050,000

21. Use of Remaining Project Funds:

The applicant contribution shall be considered as the first funds expended. After providing for all authorized costs, any remaining project funds will be considered to be RUS/State grant funds and refunded in proportion to participation in the project. If the amount of unused grant funds exceeds the grants, that part would be RUS loan funds.

22. Rates and Charges:

Rates and charges for facilities and services rendered by the Water District must be at least adequate to meet cost of maintaining, repairing and operating the water system and meeting required principal and interest payments and the required deposits to debt service and/or depreciation reserve.

Water rates will be at least:

5/8 x 3/4 - Inch Meter

First	1,500	gallons @ \$	12.75 - Minimum Bill.
Next	8,500	gallons @ \$	5.64 - per 1,000 gallons.
Next	40,000	gallons @ \$	4.65 - per 1,000 gallons.
Next	100,000	gallons @ \$	3.88- per 1,000 gallons.
All Over	150,000	gallons @ \$	3.11 - per 1,000 gallons.

3/4 - Inch Meter

First	3,000	gallons @ \$	21.66 - Minimum Bill.
Next	7,000	gallons @ \$	5.64 - per 1,000 gallons.
Next	40,000	gallons @ \$	4.65 - per 1,000 gallons.
Next	100,000	gallons @ \$	3.88- per 1,000 gallons.
All Over	150,000	gallons @ \$	3.11 - per 1,000 gallons.

1 - Inch Meter

First	5,000	gallons @ \$	33.41 - Minimum Bill.
Next	5,000	gallons @ \$	5.64 - per 1,000 gallons.
Next	40,000	gallons @ \$	4.65 - per 1,000 gallons.
Next	100,000	gallons @ \$	3.88- per 1,000 gallons.
All Over	150,000	gallons @ \$	3.11 - per 1,000 gallons.

1 1/2 - Inch Meter

First	10,000	gallons @ \$	67.18 - Minimum Bill.
Next	40,000	gallons @ \$	4.65 - per 1,000 gallons.
Next	100,000	gallons @ \$	3.88 - per 1,000 gallons.
All Over	150,000	gallons @ \$	3.11 - per 1,000 gallons.

2 - Inch Meter

First	16,000	gallons @ \$	94.96 - Minimum Bill.
Next	34,000	gallons @ \$	4.65 - per 1,000 gallons.
Next	100,000	gallons @ \$	3.88- per 1,000 gallons.
All Over	150,000	gallons @ \$	3.11 - per 1,000 gallons.

3 - Inch Meter

First	30,000	gallons @ \$	186.69 - Minimum Bill.
Next	20,000	gallons @ \$	4.65 - per 1,000 gallons.
Next	100,000	gallons @ \$	3.88- per 1,000 gallons.
All Over	150,000	gallons @ \$	3.11 - per 1,000 gallons.

4 - Inch Meter

First	50,000	gallons @ \$	285.20 - Minimum Bill.
Next	100,000	gallons @ \$	3.88- per 1,000 gallons.
All Over	150,000	gallons @ \$	3.11 - per 1,000 gallons.

6 - Inch Meter

First	100,000	gallons @ \$	529.41 - Minimum Bill.
Next	50,000	gallons @ \$	3.88- per 1,000 gallons.
All Over	150,000	gallons @ \$	3.11 - per 1,000 gallons.

8 - Inch Meter

First	160,000	gallons @ \$	800.95 - Minimum Bill.
All Over	160,000	gallons @ \$	3.11 - per 1,000 gallons.

10 - Inch Meter

First	550,500	gallons @ \$	2,040.79 - Minimum Bill.
All Over	550,000	gallons @ \$	3.11 - per 1,000 gallons.

- 23. Water Purchase Contract: *May have Contract for more than 40 years.*

The Water District will submit a Water Purchase Contract for approval by Rural Development before advertising for construction bids. If the contract is not on Form RD 442-30, "Water Purchase Contract," the contract will require approval by our Regional Attorney. The contract must meet the requirements of subsection 1780.62 of RUS Instruction 1780.

- 24. Commitment of State of Kentucky Surplus Grant:

This Letter of Conditions is issued contingent upon a firm commitment being in effect prior to advertising for construction bids for the State of Kentucky Surplus Grant in the amount of \$500,000. *Memorandum of Understanding*

- 25. Floodplain Construction:

The Water District will be required to pass and adopt a Resolution or amend its By-Laws whereby the Water District will deny any water service to any future customer wishing to build on or develop property located within a designated floodplain. If a customer or developer requests service for construction in a designated floodplain, the customer or developer must provide evidence and a justification for approval by the Water District and Rural Development officials that there are no other alternatives to construction or development within the designated floodplain. The community must be a participant in the National Flood Insurance Program (NFIP) and the customer or developer must obtain the required permits prior to the tap on restrictions being waived.

*Floodplain  
Restrictions*

- 26. Final Approval Conditions:

Final approval of this loan will depend on your willingness, with the assistance of all your co-workers, to meet the conditions of this letter in an orderly and systematic manner. Then too, final approval will depend on funds being available.

If you desire to proceed with your application, the Rural Development Manager will allot a reasonable portion of his time to provide guidance in application processing.

Sincerely,



THOMAS G. FERN  
State Director  
Rural Development

Enclosures

- cc: Rural Development Manager - Columbia, Kentucky
- Community Development Manager - Elizabethtown, Kentucky
- Lincoln Trail ADD - Elizabethtown, Kentucky
- Harper, Ferguson & Davis - Louisville, Kentucky
- Robert D. Merideth - Leitchfield, Kentucky
- ✓ HMB - Frankfort, Kentucky
- PSC - ATTN: Claude Rhorer - Frankfort, Kentucky



RECEIVED

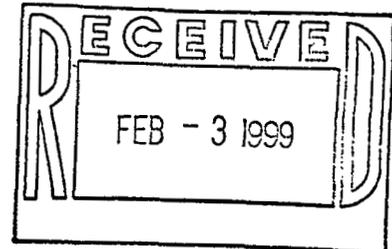
SEP 27 1999

PUBLIC SERVICE  
COMMISSION

JOHN P. McCARTY  
SECRETARY

PAUL E. PATTON  
GOVERNOR

OFFICE OF THE SECRETARY  
FINANCE AND ADMINISTRATION CABINET  
383 CAPITOL ANNEX  
FRANKFORT, KENTUCKY 40601  
(502) 564-4240  
(502) 564-6785 FAX



February 1, 1999

Mr. Joe Liles, Manager  
Grayson County Water District  
Post Office Box 1118  
Bowling Green, Kentucky 42102-1118

Dear Mr. Liles:

Enclosed is the approved copy of your Memorandum of Understanding (MOU) for the **Grayson County Water Line Project** in the amount of \$500,000.

To ensure timely disbursement of funds in accordance with the draw schedule you submitted, we are requesting that you provide the Finance and Administration Cabinet with a letter requesting a draw. The draw request should be accompanied with bills and/or invoices for the amount you wish to draw. You will need to prepare a separate draw request each time you wish to draw down funds for your project.

The Finance and Administration Cabinet will work with you in expediting your draw request. However, please understand that we cannot process a check until we receive a draw request indicating the amount you wish to draw.

All funding requests should be submitted to Mark Board. You may contact him at (502) 564-4240 if you have any questions regarding this process.

Sincerely,

John P. McCarty, Secretary  
Finance and Administration Cabinet

Enclosure: MOU

C: Mark Board  
Ed Ross, Controller

Is this agreement/contract  
exempt from review by the  
Government Contract Review  
Committee of LRC  
YES NO

MOA / PAC / PC NO. \_\_\_\_\_

COMMON WEALTH OF KENTUCKY  
FINANCE AND ADMINISTRATION CABINET

MEMORANDUM OF AGREEMENT / UNDERSTANDING  
PROGRAM ADMINISTRATION CONTRACT / PRICE CONTRACT FORM

AGENCY: FINANCE & ADMINISTRATION  
CAPITAL ANNEX, ROOM 383  
FRANKFORT, KENTUCKY 40601

OBLIGATED  
NO

PROJECT TITLE: GRAYSON COUNTY WATER  
LINE EXTENSION PROJECT  
ACCOUNT NUMBER

AUDIT REFERENCE

VENDOR NAME: GRAYSON COUNTY WATER  
DISTRICT  
COUNTY: GRAYSON

AGENCY IDENTIFIER NO.  
N/A

ADDRESS  
PO BOX 1118

NEW / RENEWAL  
NEW

CITY & STATE  
BOWLING GREEN, KENTUCKY 42102-1118

TYPE VENDOR  
WATER DISTRICT

DESCRIPTION OF AGREEMENT:  
FUNDS TO BE USED FOR CONSTRUCTION OF  
WATER LINES IN GRAYSON COUNTY.

AGREEMENT PERIOD:  
UPON APPROVAL BY COMMITTEE - JUNE 30,  
2000

TOTAL COST:  
\$500,000

PAYMENT SCHEDULE:  
DRAW SCHEDULE (APRIL, 99 - DEC. 99)

REASON FOR EXCHANGE OF  
RESOURCES OR RESPONSIBILITY - HB 321  
FINANCE CABINET PASS THRU TO THE  
GRAYSON COUNTY WATER DISTRICT

SOURCE OF FUNDS  
SURPLUS EXPENDITURE PLAN (SEP)

AGENCY CONTACT PERSON AND  
TELEPHONE NUMBER: (502) 564-4240  
MARK O. BOARD, FINANCE CABINET

AMENDMENTS  
(Finance Cabinet Use Only)

RESOLUTION  
GRAYSON COUNTY WATER DISTRICT

A RESOLUTION AUTHORIZING THE CHAIRMAN TO ENTER INTO A MEMORANDUM OF UNDERSTANDING WITH THE STATE OF KENTUCKY FINANCE AND ADMINISTRATION CABINET CONCERNING \$500,000 IN STATE FUNDS TO BE USED FOR THE CONSTRUCTION OF WATER LINE EXTENSIONS IN GRAYSON COUNTY.

WHEREAS, the 1998 General Assembly enacted House Bill 321 authorizing certain capital construction projects; and

WHEREAS, one of the local projects funded by this bill is the Grayson County Water Lines Extension Project, herein referred to as the Project; and

WHEREAS, the Finance and Administration Cabinet is charged with the authority of House Bill 321 as the grantor of the local grant for this project; and

WHEREAS, the Grayson County Water District has agreed to serve as the recipient of the Project grant money from the Cabinet under the terms outlined in the attached Memorandum of Understanding.

GRAYSON COUNTY WATER DISTRICT, BOARD OF COMMISSIONERS, GRAYSON COUNTY, KENTUCKY, DOES HEREBY RESOLVE AS FOLLOWS:

SECTION ONE

That the Chairman be authorized to enter into a Memorandum of Understanding with the Finance and Administration Cabinet with regard to \$500,000 in state funding toward the Grayson County Water Lines Extension Project. A copy of said Memorandum of Understanding is attached hereto and made a part of this Resolution. The Water District Manager is hereby authorized to prepare all necessary documents and meet administration requirements set forth in the Memorandum in order to administer the grant.

SECTION TWO

That this Resolution shall be signed by the Chairman, attested by the Secretary and made a part of the records of the Grayson County Water District. Same shall be in effect at the earliest time provided by law.

READ AND ADOPTED BY THE Grayson County Water District Board of Commissioners, Grayson County, Kentucky, assembled on the 21<sup>st</sup> day of September, 1998.

  
\_\_\_\_\_  
Ed Nichols, Chairman  
Grayson County Water District

ATTEST:

  
\_\_\_\_\_  
John R. Tomes, Secretary

## MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING (the Memorandum) is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, by and among the FINANCE AND ADMISTRATION CABINET, a governmental agency of the Commonwealth of Kentucky, with address at 383 Capitol Annex, Frankfort, Kentucky 40601, hereinafter known as "Cabinet", and the Grayson County Water District, a public body politic and a political subdivision of the county government in the Commonwealth of Kentucky, with address of PO Box 1118, Bowling Green, KY 42102-1118, hereinafter known as "Water District".

### WITNESSETH:

WHEREAS, the 1998 General Assembly enacted House Bill 321 authorizing certain capital construction projects in either the Surplus Expenditure Plan, Coal Severance Tax Project Plan, or the Regular Budget for local administration through a local grant program; and

WHEREAS, one of the local grant program projects authorized in House Bill 321 is described as follows: Grayson County Water Lines Extension (Project); and

WHEREAS, the Finance and Administration Cabinet is charged by KRS Chapters 45A and 56 as the authority over state purchasing, contracting, construction, real estate acquisition and related activities, and was designated under House Bill 321 as the grantor of the local grant sum for this Project; and

WHEREAS, the Water District has agreed to serve as the recipient of the Project grant money from the Cabinet as provided in House Bill 321 under the terms and conditions enumerated herein, and to effectuate the construction of the Project.

NOW, THEREFORE, in consideration of the mutual covenants and conditions contained herein, and for other good and valuable consideration, the receipt, mutuality and sufficiency of all of which is hereby acknowledged by the parties hereto, the Cabinet and the Water District each agree as follows:

### SECTION 1 OBLIGATIONS OF THE CABINET

The Cabinet covenants and agrees, conditioned upon the timely performance by the other parties of their respective obligations, to undertake the following obligations:

- A. The Cabinet shall pay to the Water District the grant sum of \$500,000, which represents the sums allocated for the Project by the General Assembly, in accordance with the attached draw schedule, which is incorporated herein and made a part hereof.
- B. The Cabinet may, but is not required to, make periodic inspection of the Project and may send inspection reports to the Water District. Any deficiencies identified in an inspection report shall be corrected by the Water District, and their correction reported in writing to the Cabinet within two weeks of receipt of the inspection report.
- C. The Cabinet shall cooperate fully with the Water District in order to facilitate the obligations set out in this Memorandum.

## SECTION 2 OBLIGATIONS OF THE WATER DISTRICT

The Water District covenants and agrees to undertake the following obligations:

- A. The Water District shall perform and cause to be performed all necessary acts to plan, design, engineer and construct the Project, including acquiring the necessary land and contracting company, all in accordance with applicable law and the provisions stated herein.
- B. The Water District shall perform all preparation of construction documents and preparation of bid documents.
- C. The Water District shall perform and cause to be performed all necessary acts to bid and enter into the contracts with a qualified construction company or companies for the construction of the Project; and to issue the contract or contracts for the construction of the Project.
- D. The Water District shall provide all necessary construction management services and financial management services necessary to undertake construction of the Project.
- E. The Water District shall obtain all necessary permits, licenses and approval from the appropriate governmental entities for construction of the Project.
- F. The Water District shall comply with all applicable federal and state statutes, executive orders, regulatory requirements, and policies.
- G. The Water District shall use its own procurement procedures that reflect applicable state and local laws for all purchases of services, products or construction related to this Project.
- H. The Water District shall submit quarterly progress reports to the Cabinet. Such reports shall be submitted by the 15<sup>th</sup> day of the month following the last day of each calendar quarter (i.e. January 15<sup>th</sup>, April 15<sup>th</sup>, July 15<sup>th</sup>, and October 15<sup>th</sup>). The report shall list the line items in the cost estimate and the percent of completion as well as any indication of problems or time delays.
- I. The Water District shall retain all records relating to the Project until such records are audited by the Cabinet, or for three years, whichever first occurs.
- J. A copy of the Water District's resolution authorizing the execution of this Memorandum is attached hereto and made a part hereof.
- K. The Water District shall cooperate fully with the Cabinet in order to facilitate the obligations set out in this Memorandum.
- L. The Water District shall begin design of this Project no later than November 15, 1998, and begin construction of the Project no later than May 1, 1999. The Project shall be completed by the Water District no later than December 1, 1999.

## SECTION 3 MUTUALITY OF OBLIGATIONS

- A. The parties agree that the obligations imposed upon the parties are for the benefit of the parties and that the timely fulfillment of each and every obligation in accordance with this Memorandum is necessary. The failure of any party to fulfill its obligations under this Memorandum or the failure of any event to occur by a date established by this Memorandum shall constitute a breach of this Memorandum unless the fulfillment of such obligation is waived or modified by written agreement of the parties.
- B. In the event of default by the Water District, including the failure to meet any time deadlines set out in this Memorandum, the Cabinet may declare this Memorandum of Understanding void from the beginning without further obligation to the Water District

and may commence appropriate legal or equitable action to enforce its rights under this Memorandum of Understanding, including action for recovery of funds expended hereunder.

C. Except as may otherwise be provided herein, the parties to this Memorandum of Understanding shall be solely responsible for any costs incurred in fulfilling their obligations under this Memorandum of Understanding and no party shall have any claim against the other party for reimbursement of such costs, whether or not a party is in default.

#### SECTION 4 TERM OF MEMORANDUM

A. This Memorandum shall be effective as of the date first written above and shall terminate upon the final completion date of the Project specified in Section 2(L) unless extended by the parties.

#### SECTION 5 MISCELLANEOUS PROVISIONS

A. This Memorandum may be signed by each party upon a separate copy, and in such case one counterpart of this Memorandum shall consist of a sufficient number of such copies to reflect the signature of each party hereto. This Memorandum may be executed in two or more counterparts, each of which shall be deemed an original, and it shall not be necessary in making proof of this Memorandum or the terms and conditions hereof to produce or account for more than one of such counterparts.

B. The headings set forth in this Memorandum are for convenience or reference only, and the words contained therein shall in no way be held to explain, modify, amplify or aid in the interpretation, construction or meaning of the provisions of this Memorandum.

C. The terms and conditions of this Memorandum shall be binding upon and shall inure to the benefit of the successor and assigns, respectively, of the parties. This provision shall not be construed to permit assignment by any party of any of its rights and duties under this Memorandum, which assignment shall be prohibited except with the prior written consent of all parties hereto.

D. This Memorandum sets forth the entire understanding of the parties with respect to the subject matter hereof, supersedes all existing agreements among them concerning the subject matter hereof, and may be modified only by a written instrument duly executed by each of the parties hereto.

E. Time is of the essence in the performance of each of the terms and conditions of this Memorandum.

F. The parties agree that any suit, action or proceeding with respect to this Memorandum may only be brought in or entered by, as the case may be, the courts of the Cabinet of Kentucky situated in Frankfort, Franklin County, Kentucky; or the United States District Court for the Eastern District of Kentucky, Frankfort Division.

G. All notices, requests, demands, waivers, and other communications given as provided in this Memorandum shall be in writing, and shall be addressed as follows:

If to the Cabinet:

Finance and Administration Cabinet  
Office of the Secretary  
ATTN: Mark Board  
Room 383, Capitol Annex  
Frankfort, KY 40601

If to the Water District:

Mr. Joe Liles, Manager  
Grayson County Water District  
PO Box 1118  
Bowling Green, KY 42102-1118

H. The Cabinet may audit or review all documentation and records of the Water District relating to this Project pursuant to the provisions of KRS 45A.150.

I. The parties agree that this Memorandum of Understanding is not entered into under the provisions of KRS 56.8161 et seq.

IN WITNESS WHEREOF, the Cabinet and the Water District have executed this Memorandum as of the date first above written.

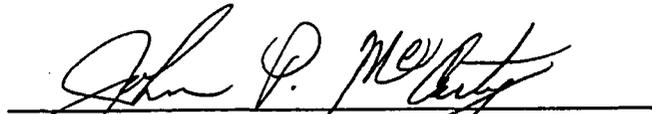
CABINET:

Approved as to Form and Legality

FINANCE AND ADMINISTRATION CABINET



Office of Legal and Legislative  
Services, Finance and  
Administration Cabinet



John P. McCarty  
Secretary, Finance and Administration Cabinet

WATER DISTRICT:

Reviewed:

GRAYSON COUNTY WATER DISTRICT



Robert Meredith  
Counsel for Grayson Co. Water District



Ed Nichols, Chairman

MEMORANDUM OF UNDERSTANDING

DRAW SCHEDULE

PROJECT ACCOMPLISHMENT	EXPECTED DATE OF DRAW	AMOUNT OF DRAW
Engineering	4-1-99	\$ 60,000.00
Begin Construction	5-1-99	10,000.00
Construction Progress Payment (Estimate Nos. 1 and 2)	8-1-99	190,000.00
Construction Progress Payment (Estimate Nos. 3 and 4)	10-1-99	200,000.00
Construction Progress Payment (Estimate Nos. 5 and 6) – FINAL COMPLETION	12-1-99	40,000.00
TOTAL DISBURSEMENT		\$ 500,000.00

THE PAYMENT OF \$500,000 SHALL BE MADE UPON COMPLETION OF ALL LEGAL REQUIREMENTS AND REVIEW TO EFFECTUATE THIS DOCUMENT.

MEMORANDUM OF UNDERSTANDING

DRAW SCHEDULE

The Payment of \$ \_\_\_\_\_ shall be made upon completion of all legal requirements and review to effectuate this document.

**GRAYSON COUNTY WATER DISTRICT  
WATER LINE EXTENSION PROJECT  
PROJECT TIMELINE**

	Nov '98/April '99	May '99	May '99	July/Nov '99	Nov '99
Architectural Design/Bids	_____				
Award Contract		_____			
Begin Construction			_____		
Laying Water Lines				_____	
Final Completion					_____

GRAYSON COUNTY WATER DISTRICT  
GRAYSON COUNTY WATER LINE EXTENSION PROJECT  
September 21, 1998

**INTRODUCTION**

The service area of the Grayson County Water District (Water District) includes all of Grayson County, Kentucky, except the area served by the Cities of Leitchfield and Caneyville and an area in the southern part of the county served by Edmonson County Water District. It is estimated that there are approximately 500 households within the Water District's service area that do not have access to an approved public water supply. The roads or areas in need of a public water supply are scattered throughout Grayson County and require water line extensions from the existing Water District system. The people living in almost all of these households are drinking contaminated water and the Water District is continuing its efforts to alleviate this problem.

**PROJECT DESCRIPTION**

The Water District's Water Line Extension Project (Project) will be funded in accordance with a "Memorandum of Understanding with the State of Kentucky Finance and Administration Cabinet" utilizing \$500,000 in state funds (State Funds) to construct water lines and appurtenances. The Water District has received requests for service from all of the areas as reflected on the attached "Areas Expressing Interest In Water Line Extensions, Grayson County Water District, May 19, 1997, with map attached" (List of Lines). The Water District has an application pending with the United States Department of Agriculture, Rural Development, for additional funding and is hopeful the State Funds can help leverage an additional federal grant and loan. Although the Water District has requested sufficient federal loan and grant funds to serve all those in Grayson County who would like to have water service, the Water District has received indications that due to the lack of available federal funds, only a portion of the funds needed may be approved. The Water District is hopeful a minimum grant of \$500,000 and loan of \$1,000,000 (Federal Funds) will be received. The State Funds and Federal Funds received will be utilized to construct water lines to the roads or areas in the order shown on the List of Lines subject to each property owner granting the easements required for the construction and the listed number of existing full time residences signing a contract for water service and paying the standard connect fee. If a road or area fails to provide the required easements and number of service contracts and

connect fees for full time residences within a reasonable time, after a 10 day written notice the area will be dropped from the Project. The next best road or area will then be added to the Project. The Project cost as reflected on the List of Lines is estimated and may vary based on the Final Engineering Report after construction bids are received. Those roads or areas to be included in the Project may be adjusted after the construction bids are received to bring the Project cost within the available State Funds and possible Federal Funds.

Initially it is anticipated that water lines will be constructed from the utilization of the State Funds on the first 18 roads or areas shown on the List of Lines. The project would serve 74 full time residences through the construction of just over 13 miles of water lines.

If the Federal Funds are approved and combined with the State Funds, an additional 26 roads or areas shown on the List of Lines will be added to the project. This will also add 148 more full time residences through the construction of 39 miles of water lines.

It is recognized there are more roads or areas desiring water service and shown on the List of Lines than there will be State Funds and Federal Funds available to finance the construction. The method of determining the roads or areas for water line construction will be that the roads or areas will be considered in the order shown on the List of Lines, subject to the conditions relating to the easements, contracts for service and connect fee payment as set out in this document.

### **SUMMARY AND CONCLUSIONS**

The water line extensions and appurtenances referred to as Project 11 and as illustrated on the List of Lines and map are greatly needed to alleviate a serious health hazard. Both fecal coliform and parasitic contamination are widespread in wells and springs now in use as individual water supplies. Also, mineral concentrations are present at unacceptable levels in water from underground sources.

The proposed Project will serve a minimum of approximately 74 full time residences through 13.3 miles of water mains utilizing the State Funds and may be expanded to serve a total of 222 full time residences through 52.8 miles of water mains should the Federal Funds become available.

AREAS EXPRESSING INTEREST IN WA  
LINE EXTENSIONS  
GRAYSON COUNTY WATER DISTRICT  
• May 19, 1997 •

COST PER HOME	LINE I.D.	LINE NAME	LINE SIZE	LENGTH	EXIST FULL-TIME HOMES	FULL-TIME HOMES REQ'D	PROJECT COST	CUMULATIVE PROJECT COST	FULL-TIME CUM. HOMES	RATE INCREASE REQ'D. FOR PROJECT
<b>LINES WITH HOMES:</b>										
3,567	D25	Mt. Zion Road	4	1,400	4	3	10,700	10,700	3	0.06%
3,620	B43	Holiday Rough Road	4	950	2	2	7,240	17,940	5	0.09%
5,235	B2B	Skeese Rd.	4	1,450	3	2	10,470	28,410	7	0.16%
5,398	D1	Wortham Cemetary Road	4	3,000	5	4	21,590	50,000	11	0.28%
5,560	B45	Braton Road	4	1,550	3	2	11,120	61,120	13	0.35%
5,720	C25	Armes Lively Road	4	1,600	2	2	11,440	72,560	15	0.41%
5,720	A35a	Shores Road	4	800	1	1	5,720	78,280	16	0.45%
6,045	A35	Duff Rd. / Shores Rd.	4	15,300	22	18	108,810	187,090	34	1.09%
6,045	A24	Jonnie Frank Rd.	4	3,400	5	4	24,180	211,270	38	1.23%
6,380	B49	Omer Drive & Elmore Road	4	5,410	8	6	38,280	249,550	44	1.46%
6,693	B6	Holly - Hilton Hill Rd.	4	3,800	5	4	26,770	276,320	48	1.62%
7,743	A35e	Concord Road	4	4,450	5	4	30,970	307,290	52	1.80%
8,307	B5	Conklin School Rd.	4	3,600	4	3	24,920	332,210	55	1.96%
8,500	B43a	Holiday Rough Road	4	2,460	3	2	17,000	349,210	57	2.06%
8,523	D24	Gibson Lane	4	3,700	4	3	25,570	374,780	60	2.22%
8,630	B25	Delk Lane	4	2,500	2	2	17,260	392,040	62	2.32%
8,659	A37	Four Seasons Autumn Ridge Rd.	4	8,780	9	7	60,610	452,650	69	2.69%
8,696	B6a	Holly Hinton Mill Road & Eanes Road	4	6,300	6	5	43,480	496,130	74	2.96%
8,793	B15	Narrows Rd.	4	5,100	5	4	35,170	531,300	78	3.17%
9,115	A28	Yeaman Olaton Rd.	4	2,650	2	2	18,230	549,530	80	3.28%
9,600	A35h	Duff Road	4	4,200	4	3	28,800	578,330	83	3.46%
9,602	B11	Coy Drane Rd.	4	7,000	6	5	48,010	626,340	88	3.75%
9,606	A25	Yeaman Olaton-Jugville Area	4	35,700	79	63	230,840	857,180	88	5.32%
9,925	D15	McClure Rd.	6	40,950	5	4	374,310	1,231,490	151	7.42%
10,140	A35b	Concord Road	4	4,450	4	3	39,700	1,271,190	155	7.66%
10,250	A32	Thommason Cem. Rd.	4	3,000	2	2	20,500	1,322,110	160	7.96%
10,375	B7A	Morrison Clifty Conder Rd.	4	3,040	2	2	20,750	1,342,860	162	8.09%
10,463	C11	Cook Rd.	4	9,200	7	6	62,780	1,405,640	168	8.47%
10,636	B9	Beaver Dam Creek W	4	7,800	6	5	53,180	1,458,820	173	8.79%
10,735	C26	McStouts Road	4	3,150	2	2	21,470	1,480,290	175	8.92%
11,051	A19	Junction Rd. Lone Hill Rd. (incl. Pump Sta.)	4	25,200	24	19	209,970	1,690,260	194	10.18%
11,220	D8	Grindstone Road	4	3,300	2	2	22,440	1,712,700	196	10.31%
11,327	C14	Renfrow Rd.	4	5,000	4	3	33,980	1,746,680	199	10.52%
11,540	D14A	Byrtle Grove Rd.	4	3,400	3	2	23,080	1,769,760	201	10.65%
11,670	B27	Big Clifty Rd.	4	8,600	6	5	58,350	1,828,110	206	11.00%
12,510	B40	Old Hartford Rd.	4	1,850	1	1	12,510	1,840,620	207	11.08%
12,510	D21	Hooper Barton Rd.	4	1,850	1	1	12,510	1,853,130	208	11.16%
12,830	A44	Elmer Geary Road	4	1,900	1	1	12,830	1,865,960	209	11.23%
12,835	A23	Locust Hill Rd.	4	3,800	2	2	25,670	1,891,630	211	11.39%
12,995	D7	Progress Rd. Area	4	7,700	5	4	51,980	1,943,610	215	11.70%
13,050	C7	Pleasant View Ch. Rd.	4	5,800	4	3	39,150	1,982,760	218	11.94%
13,480	A35c	Rockledge Road	4	2,000	1	1	13,480	1,996,240	219	12.02%
13,480	A10	Adams Lane	4	2,000	1	1	13,480	2,009,720	220	12.10%
13,805	B35	Hickory Flats Rd.	4	4,100	3	2	27,610	2,037,330	222	12.27%
13,965	A14	Yeaman Rd.	4	8,300	5	4	55,860	2,093,190	226	12.61%
14,130	D2	Old Buzzard Roost Road	4	2,100	1	1	14,130	2,107,320	227	12.69%
14,343	A34	Panther Creek Rd.	4	6,400	4	3	43,030	2,150,350	230	12.96%
14,770	D13	Hickory Flats - Annie Boone Rd.	4	2,200	1	1	14,770	2,165,120	231	13.05%
14,775	C9	Pleasant View Ch. Rd.	4	4,400	3	2	29,550	2,194,670	233	13.22%
14,775	C8	Pleasant View Ch. Rd.	4	4,400	2	2	29,550	2,224,220	235	13.40%
15,033	A36	Beachamp Cem. Rd.	4	8,960	5	4	60,130	2,284,350	239	13.77%
15,260	A27	Free Zion Rd.	4	4,550	2	2	30,520	2,314,870	241	13.96%
15,420	A8	Lahue Cemetery Rd.	4	2,300	1	1	15,420	2,330,290	242	14.05%
15,420	A21	Dude Decker Rd.	4	2,300	1	1	15,420	2,345,710	243	14.14%
15,740	B23b	Summit Road	4	2,350	1	1	15,740	2,361,450	244	14.24%
16,065	A30	Richland Rd.	4	4,800	3	2	32,130	2,393,580	246	14.43%
16,065	A11	Hwy 736 Cummins Rd.	4	4,800	2	2	32,130	2,425,710	248	14.63%
16,230	D20	Branch Road	4	4,850	3	2	32,460	2,458,170	250	14.83%
16,390	B18a	Spurrier Road	4	4,900	3	2	32,780	2,490,950	252	15.03%
16,390	A12	Ridge Rd.	4	4,900	3	2	32,780	2,523,730	254	15.23%
16,633	C17	Big Ready Rd.	4	9,950	5	4	66,530	2,590,260	258	15.63%
16,710	B15A	Narrows Rd.	4	2,500	1	1	16,710	2,606,970	259	15.73%
16,710	B13A	Barton Run Rd.	4	2,500	1	1	16,710	2,623,680	260	15.83%
16,710	B6b	Holly Hinton Mill Road	4	2,500	1	1	16,710	2,640,390	261	15.94%
16,715	A24a	Johnny Frank Road	4	5,000	2	2	33,430	2,673,820	263	16.14%
17,360	A35D	Wilson Cemetary Rd.	4	2,600	1	1	17,360	2,691,180	264	16.24%
17,793	C16	Ready Jackson Rd.	4	8,000	4	3	53,380	2,744,560	267	16.57%
18,850	A34B	Alterhouse Lane	4	2,830	1	1	18,850	2,763,410	268	16.69%
19,300	C15	Coates Farris Rd.	4	2,900	1	1	19,300	2,782,710	269	16.80%
19,300	C21	Sadler Lane	4	8,700	4	3	57,900	2,840,610	272	17.16%
19,723	C24	Bowling Green Rd. (Includes Pump Sta.)	4	6,200	5	4	78,890	2,919,500	276	17.64%

\$500,000 STATE GRANT

\$1.0 MIL LOAN \$10.5 GRANT  
RURAL DEVELOPMENT

13.3 MILES

52.8 MILES TOTAL

AREAS EXPRESSING INTEREST IN WATER  
 LINE EXTENSIONS  
 GRAYSON COUNTY WATER DISTRICT  
 • May 19, 1997 •

COST PER HOME	LINE I.D.	LINE NAME	LINE SIZE	LENGTH	EXIST FULL-TIME HOMES	FULL-TIME HOMES REQ'D	PROJECT COST	CUMULATIVE PROJECT COST	FULL-TIME CUM. HOMES	RATE INCREASE REQ'D. FOR PROJECT
19,945	A5	Shartzler Rd.	4	6,000	2	2	39,890	2,959,390	278	17.89%
19,950	D23	Miller Road	4	3,000	1	1	19,950	2,979,340	279	18.01%
19,950	B50	Vanmeter Lane	4	3,000	1	1	19,950	2,999,290	280	18.13%
20,270	B30	Williams Lane & Keller School Rd.	4	6,100	3	2	40,540	3,039,830	282	18.38%
20,590	A1	Green Meadows Rd.	4	3,100	1	1	20,590	3,060,420	283	18.50%
20,920	C5	R. Smith Road	4	3,150	1	1	20,920	3,081,340	284	18.63%
21,730	D9	Sims Rd.	4	6,552	3	2	43,460	3,124,800	286	18.90%
21,885	B19	Mt. Zion Rd.	4	6,600	2	2	43,770	3,168,570	288	19.17%
21,885	A13	Owensboro Rd. Hwy 54	4	6,600	3	2	43,770	3,212,340	290	19.44%
22,530	D12	Forrester Rd.	4	3,400	1	1	22,530	3,234,870	291	19.58%
22,535	D21A	Hooper Barton Rd./Carroll Rd.	4	6,800	3	2	45,070	3,279,940	293	19.85%
23,310	D3	Hwy 479 (includes Pump Station)	4	4,900	4	3	69,930	3,349,870	296	20.28%
23,500	B1	Butler Rd.	4	3,550	1	1	23,500	3,373,370	297	20.43%
23,830	B7b	Morrison Clifty Road	4	3,600	1	1	23,830	3,397,200	298	20.57%
23,830	C22	Cedar Lane	4	3,600	1	1	23,830	3,421,030	299	20.72%
24,150	C3	Blackrock Rd.	4	7,300	2	2	48,300	3,469,330	301	21.02%
25,120	A26	Olaton Rd. Fallen Rock	4	11,400	4	3	75,360	3,544,690	303	21.49%
25,725	B48	Sam Kitt Road (includes Master Meter)	4	5,900	2	2	51,450	3,596,140	305	21.81%
26,410	D10A	Higdon Rd.	4	4,000	1	1	26,410	3,622,550	306	21.97%
26,410	B31	Franklin Drive	4	4,000	1	1	26,410	3,648,960	307	22.13%
27,710	D6	Fields Lane	4	4,200	1	1	27,710	3,676,670	308	22.31%
30,290	B18b	Shaw Creek Road	4	4,600	1	1	30,290	3,706,960	309	22.49%
30,940	A15	Lone Hill Rd. S	4	4,700	1	1	30,940	3,737,900	310	22.69%
38,050	D5	Sammy Powell Rd.	4	5,800	1	1	38,050	3,775,950	311	22.92%
44,520	D8a	Grindstone Road	4	13,600	3	2	89,040	3,864,990	313	23.49%
SUBTOTAL			FOOTAGE	540,632		313	\$3,864,990			
			MILES	102.4						

AREAS EXPRESSING INTEREST IN WATER  
LINE EXTENSIONS  
GRAYSON COUNTY WATER DISTRICT  
• May 19, 1997 •

COST PER HOME	LINE I.D.	LINE NAME	LINE SIZE	LENGTH	EXISTING PART-TIME HOMES	FULL-TIME HOMES	PROJECT COST	CUMULATIVE PROJECT COST	PART-TIME CUM. HOMES	RATE INCREASE REQ'D. FOR PROJECT
LINES FOR PART-TIME RESIDENTS ONLY:										
	A34c	Alterhouse Lane	4	200	4	0	2,940	3,867,930	3	23.50%
	A42	Bessie Lane	4	1,000	21	0	16,350	3,884,280	21	23.59%
	A39A	Burr Oak Rolling Bottom Rd.	4	1,200	13	0	13,800	3,898,080	32	23.67%
	A41	Carter Lane	4	850	8	0	9,340	3,907,420	39	23.73%
	A36A	Beauchamp Cemetary Road Area	4	1,800	12	0	17,130	3,924,550	49	23.83%
	A37A	Four Seasons/Autumn Ridge	4	3,600	19	0	32,060	3,956,610	65	24.03%
	A33	Indian Valley	4	9,460	50	0	84,780	4,041,390	108	24.54%
	A35G	Concord Point Shores Road Area	4	10,800	37	0	86,850	4,110,880	139	24.95%
	A38	County Rd off Hwy 736	4	1,350	2	0	38,820	4,149,700	146	25.20%
	B15B	Narrows Rd.	4	1,000	3	0	8,110	4,157,810	149	25.25%
	B3	Lake Shore Rd.	4	6,600	18	0	50,910	4,208,720	164	25.56%
	A24B	Johnny Frank Rd.	4	1,550	3	0	11,670	4,220,390	167	25.63%
	A31A	Kendall Rd.	4	600	1	0	4,430	4,224,820	168	25.66%
	A8A	Lahue Cemetary Rd.	4	600	1	0	4,430	4,229,250	169	25.68%
	A32A	Thommason Cemetary Rd.	4	2,550	4	0	18,140	4,247,390	172	25.80%
	D11A	Logsdon Cemetary Rd.	4	3,300	2	0	22,440	4,269,830	174	25.94%
	A20	Junction Road	4	2,400	1	0	16,070	4,285,900	175	26.04%
		SUBTOTAL		FOOTAGE MILES	48,860		\$420,910			
		CUMULATIVE SUBTOTAL		FOOTAGE MILES	589,492		\$4,285,900			

COST PER HOME	LINE I.D.	LINE NAME	LINE SIZE	LENGTH	EXIST FULL-TIME HOMES	FULL-TIME HOMES REQ'D	PROJECT COST	CUMULATIVE PROJECT COST	FULL-TIME CUM. HOMES	RATE INCREASE REQ'D. FOR PROJECT
LINES WITHOUT HOMES:										
	C1	Hatfield Rd.	4	300	0	0	\$1,940	\$4,287,840	313	26.24%
	B2	Butler Rd.	4	800	0	0	5,170	4,293,010	313	26.27%
	A22	Dude Decker Rd.	4	1,000	0	0	6,470	4,299,480	313	26.32%
	B42	Quarry Rd.	4	1,500	0	0	9,700	4,309,180	313	26.38%
	D17	Bloomington Rd.	4	1,600	0	0	10,350	4,319,530	313	26.45%
	B14	Grogan Rd.	4	1,400	0	0	9,050	4,328,580	313	26.51%
	B37	Willis Rd. (at Beehive Factory)	4	2,900	0	0	18,750	4,347,330	313	26.63%
	C2	Laurel Fork Rd.	4	3,200	0	0	20,690	4,368,020	313	26.76%
	A20	Junction Hill Rd.	4	2,400	0	0	15,520	4,383,540	313	26.86%
	A9	Duff Rd.	4	4,600	0	0	29,740	4,413,280	313	27.06%
	B26	Pearl Oak Rd.	4	1,300	0	0	8,410	4,421,690	313	27.11%
	B30a	Williams Rd.	4	1,500	0	0	9,700	4,431,390	313	27.18%
	C15a	Coates Farris Rd.	4	2,550	0	0	16,490	4,447,880	313	27.28%
	B46	Johnson Rd.	4	2,800	0	0	18,100	4,465,980	313	27.40%
	B47	Bethel Church Powell Rd.	4	1,000	0	0	6,470	4,472,450	313	27.44%
	B43b	Holiday Rough Rd.	4	1,500	0	0	9,700	4,482,150	313	27.51%
	A45	Harry Duggins Rd.	4	1,530	0	0	9,890	4,492,040	313	27.57%
	B44	Kerr Rd.	4	1,400	0	0	9,050	4,501,090	313	27.63%
	C25a	Armes Lively Rd.	4	450	0	0	2,910	4,504,000	313	27.65%
	C27	Hwy. 185	4	860	0	0	5,560	4,509,560	313	27.69%
	C23	Shrewsbury Sadler Rd.	4	1,056	0	0	6,830	4,516,390	313	27.73%
	A3	Taylor Cemetary Rd.	4	1,580	0	0	10,220	4,526,610	313	27.80%
	C6	Miller Orchard Rd.	4	2,300	0	0	14,870	4,541,480	313	27.89%
	C18	Big Ready Rd.	4	2,900	0	0	18,750	4,560,230	313	28.02%
		SUBTOTAL		FOOTAGE MILES	42,426		\$274,330			
		TOTAL		FOOTAGE MILES	631,918		\$4,560,230			

Notes:

- (1) Part time homes were determined by field observation in March and April, 1997.
- (2) Line length shown for Part-time residents is the incremental footage required to reach Part-time residences remaining after lines are constructed to reach adjacent Full-time residences.
- (3) The cost per home for Full-time residents does not reflect any Part-time residents that may be along the line.

RECEIVED

SEP 27 1999

PUBLIC SERVICE  
COMMISSION

**PRELIMINARY ENGINEERING REPORT**

Water System Additions  
Project 11  
Grayson County Water District

August 20, 1997



Prepared by the Engineering Staff  
Warren Rural Electric Cooperative Corporation

TABLE OF CONTENTS

Introduction ..... 1

Summary and Conclusions ..... 1

Project Description ..... 2

Project Budget ..... 3

Health Hazards to be Alleviated by the Project  
Household Income Information and ..... 4

Financial Considerations ..... 5

Proposed Water Rates ..... 7

Proforma Adjustment ..... 8

**Appendix**

Letter from Leitchfield Pediatric Clinic

Letter from Lincoln Trail Area Health Department

**Summary/Addendum to Preliminary Engineering Report**

Attachment No. 1 - Interest in Water Line Extension

Exhibit A - Map of Existing System and the  
Proposed Improvements

## INTRODUCTION

The service area of the Grayson County Water District includes all of Grayson County, Kentucky, except the area served by the Cities of Leitchfield and Caneyville and a small area in the southern part of the county served by Edmonson County Water District. It is estimated that there are approximately 600 households within the District's service area that do not have access to an approved public water supply. The people living in almost all of these households are drinking contaminated water and the District is continuing its efforts to alleviate this problem.

The District is applying to Rural Development (RD) for funds to construct water lines in several areas of Grayson County that do not have a source of pure drinking water. The information provided in this report more fully describes these proposed extensions, called Project 11, emphasizes the need for the construction, and supplies appropriate financial summaries.

## SUMMARY AND CONCLUSIONS

The water line extensions and other system improvements referred to as Project 11 and as illustrated on the enclosed map are greatly needed to alleviate a serious health hazard. Both fecal coliform and parasitic contamination are widespread in wells and springs now in use as individual water supplies. Also, mineral concentrations are present at unacceptable levels in water from underground sources.

The proposed project to serve approximately 488 customers is economically feasible with an 8.2 percent general rate increase if a \$2,529,500 grant and a \$1,646,600 loan are obtained from RD. The project qualifies for the RD poverty level

interest rate (4.5 percent) on loan funds and is eligible for up to 75 percent grant funding. Should \$2,529,500 grant funding be unavailable, the Board of Commissioners of the Grayson County Water District desires consideration for available grant funding.

#### PROJECT DESCRIPTION

The proposed project consists of construction of approximately 103.8 miles of 4-inch and 7.8 miles of 6-inch water mains and appurtenances. Three small booster pumping stations are included in the project and will be located on Lone Hill Road, Bowling Green Road, and Hwy 479 to provide adequate pressure to those areas. Approximately 488 meters will be installed adjacent to the mains to serve an estimated 1,200 people. As shown on the enclosed map (Exhibit A), the extensions are located throughout the District's service area.

The Project Budget, which includes estimates of various costs and funding sources for the project, is presented on the next page.

**PRELIMINARY PROJECT BUDGET**  
**WATER SYSTEM ADDITIONS - PROJECT 11**  
**GRAYSON COUNTY WATER DISTRICT**  
August 20, 1997

PROJECT COSTS

1. Construction		\$3,628,000
2. Engineering		
a. Design & Engr. During Construction	190,400	
b. Inspection	<u>103,400</u>	
		293,800
3. Administrative Expenses		35,000
4. Easement and Site Acquisition		20,000
5. Legal Costs		21,900
6. Interest During Construction		81,500
7. Contingency		<u>205,700</u>
	<b>TOTAL PROJECT COST</b>	<b><u>\$4,285,900</u></b>

PROJECT FUNDING

1. RECD Loan		1,646,600
2. RECD Grant		2,529,500
3. District Contribution - Tap Fees		<u>109,800</u>
	<b>TOTAL FUNDING</b>	<b><u>\$4,285,900</u></b>

## HEALTH HAZARDS

As stated previously, serious health hazards are present in private water supplies now being used in the project area. The Appendix includes a letter from Dr. Joe M. Lee documenting outbreaks of infections caused by water-borne bacteria and parasites. These infections have resulted in hospitalization of both children and adults.

The Appendix also includes a letter from the Lincoln Trail District Health Department outlining the water related health problems in the county. These problems include malfunctioning sewage systems, mineral pollution, and lack of adequate supply. Department staff members reviewed the results of bacteriological tests performed on water samples taken from private water supplies in the county. As the letter indicates, a large percentage of all individual water supplies tested were contaminated with bacteria. The presence of coliform bacteria indicates that residue from human and/or animal waste matter is entering the drinking water supply. The list of water-borne bacterial diseases that could be contracted by drinking water polluted with such waste includes dysentery, gastroenteritis, and infectious hepatitis.

## HOUSEHOLD INCOME INFORMATION

Qualifications for funding from RD are based in part on the median income level of the households affected by the project. In order to qualify for the lowest interest rate available, the median income level for households in the project area must be below \$17,785. An examination of U.S. Census data indicates that the median household income in Grayson County is \$17,306. Since this income level is below the required amount, the project qualifies for the poverty level interest rate of 4.5 percent on RD loan funds.

In order to qualify for the RD grant, the median household income must be below the poverty level and the debt service per equivalent residential customer must be greater than 0.5 percent of the median household income. To qualify for the poverty grant level in Grayson County, the debt service per equivalent residential customer must be greater than \$87. The current debt service per equivalent customer including Project 10 currently under construction is \$108 and will be \$117 after Project 11. Therefore, the project does qualify for poverty level grant funds.

### FINANCIAL CONSIDERATIONS AND PROPOSED WATER RATES

The methodology used in developing the District's existing rate schedule was taken from the American Water Works Association, Manual M-1, Water Rates, Section 5, "Rate Design for Small Utilities", published by the AWWA in 1991. Basic philosophy and methodology presented in other sections of that manual were also incorporated into the rate design.

It was determined that with the additional debt service and operating expenses resulting from the proposed project, a rate increase averaging 8.2 percent is required. This increase will also allow an adequate margin for depreciation funds to be accumulated for system maintenance, minor improvements, and special programs. Because the percentage increase will be the same across the entire rate schedule, the principles used in the existing rate design will be upheld.

As the District's facilities continue to age and more facilities are added, the need for expenditures on maintenance and upkeep is expected to increase. Two examples of major upcoming expenditures from depreciation funds include tank maintenance and

meter replacement programs. These are only two examples of the many uses of depreciation funds that are required for system upkeep. Therefore, it is very important for the District to implement water rates that result in sufficient revenue so that these funds will be available.

The schedule of water rates recommended in conjunction with this project is shown on the following page. Following the rate schedule is the Proforma Adjustment which shows the estimated revenues (which include the rate increase) and expenses for the first full year of operation after the completion of Project 11.

PROPOSED MONTHLY WATER RATES  
GRAYSON COUNTY WATER DISTRICT

5/8 x 3/4 Inch Meter

First	1,500 Gallons	\$	13.80 Minimum Bill
Next	8,500 Gallons		6.10 per 1,000 Gallons
Next	40,000 Gallons		5.03 per 1,000 Gallons
Next	100,000 Gallons		4.20 per 1,000 Gallons
Over	150,000 Gallons		3.37 per 1,000 Gallons

3/4 Inch Meter

First	3,000 Gallons	\$	23.44 Minimum Bill
Next	7,000 Gallons		6.10 per 1,000 Gallons
Next	40,000 Gallons		5.03 per 1,000 Gallons
Next	100,000 Gallons		4.20 per 1,000 Gallons
Over	150,000 Gallons		3.37 per 1,000 Gallons

1-Inch Meter

First	5,000 Gallons	\$	36.15 Minimum Bill
Next	5,000 Gallons		6.10 per 1,000 Gallons
Next	40,000 Gallons		5.03 per 1,000 Gallons
Next	100,000 Gallons		4.20 per 1,000 Gallons
Over	150,000 Gallons		3.37 per 1,000 Gallons

1-1/2-Inch Meter

First	10,000 Gallons	\$	72.69 Minimum Bill
Next	40,000 Gallons		5.03 per 1,000 Gallons
Next	100,000 Gallons		4.20 per 1,000 Gallons
Over	150,000 Gallons		3.37 per 1,000 Gallons

2-Inch Meter

First	16,000 Gallons	\$	104.37 Minimum Bill
Next	34,000 Gallons		5.03 per 1,000 Gallons
Next	100,000 Gallons		4.20 per 1,000 Gallons
Over	150,000 Gallons		3.37 per 1,000 Gallons

3-Inch Meter

First	30,000 Gallons	\$	202.00 Minimum Bill
Next	20,000 Gallons		5.03 per 1,000 Gallons
Next	100,000 Gallons		4.20 per 1,000 Gallons
Over	150,000 Gallons		3.37 per 1,000 Gallons

4-Inch Meter

First	50,000 Gallons	\$	308.59 Minimum Bill
Next	100,000 Gallons		4.20 per 1,000 Gallons
Over	150,000 Gallons		3.37 per 1,000 Gallons

6-Inch Meter

First	100,000 Gallons	\$	572.82 Minimum Bill
Next	50,000 Gallons		4.20 per 1,000 Gallons
Over	150,000 Gallons		3.37 per 1,000 Gallons

8-Inch Meter

First	160,000 Gallons	\$	866.63 Minimum Bill
Over	160,000 Gallons		3.37 per 1,000 Gallons

10-Inch Meter

First	550,000 Gallons	\$	2,175.67 Minimum Bill
Over	550,000 Gallons		3.37 per 1,000 Gallons

PROFORMA ADJUSTMENT  
WATER SYSTEM ADDITIONS - PROJECT 11  
GRAYSON COUNTY WATER DISTRICT

	EXISTING SYSTEM	CHANGES DUE TO PROJECT 10 AND WHOLESALE RATE INCREASE	CHANGES ON EXISTING SYSTEM FROM RATE INCREASE FOR PROJ. 11	CHANGES DUE TO NEW PROJECT 11 CUSTOMERS	TOTAL FUTURE SYSTEM AFTER PROJECT
<b>OPERATING REVENUE:</b>					
<b>METERED &amp; OTHER</b>					
Meter Sales Revenue	\$1,115,497	\$260,115 (1)	\$112,679 (3)	\$150,073	\$1,638,364
Forfeited Discounts	27,922	0	0	0	27,922
Other Meter Sales Rev.	0	0	0	0	0
Misc. Service Revenue	5,154	0	0	0	5,154
Other Water Revenue	105	0	0	0	105
Misc. Income-Interest	20,687	0	0	0	20,687
<b>TOTAL OPERATING REVENUE</b>	<b>\$1,169,365</b>	<b>\$260,115</b>	<b>\$112,679</b>	<b>\$150,073</b>	<b>\$1,692,232</b>
<b>OPERATING EXPENSE:</b>					
<b>SOURCE OF SUPPLY &amp; PUMP. EXP.</b>					
Purchased Water	\$239,580	\$51,349 (4)	\$0	\$26,436	\$317,365
Purch. Power - Pump Sta.	9,205	2,922	0	8,100	20,227
Mat'l. & Supplies and Misc.	0	0	0	0	0
Contr. Serv. - Audit & Legal	503	162	0	302	967
Contr. Serv. - Operation Labor	1,373	504	0	824	2,701
Insurance - Gen. Liab. & Other	824	249	0	494	1,567
<b>TRANSMISSION AND DISTRIBUTION</b>					
Purch. Power - Storage Fac.	873	0	0	0	873
Purch. Power - Master Meters	673	120	0	150	943
Mat'l. & Supplies and Misc.	265	45	0	109	419
Contr. Serv. - Audit & Legal	899	123	0	133	1,155
Contr. Serv. - Op. & Mtr. Labor	77,075	32,852	0	31,782	141,709
Contr. Serv. - Scada	50	0	0	3,000	3,050
Transportation Expenses	0	0	0	0	0
Insurance - Gen. Liab. & Other	2,592	263	0	383	3,238
<b>CUSTOMER ACCOUNTS</b>					
Mat'l. & Supplies and Misc.	12,437	1,633	0	1,836	15,906
Contr. Serv. - Audit & Legal	1,006	135	0	148	1,289
Contr. Serv. - Meter Reading	31,190	5,817	0	4,603	41,610
Contr. Serv. - Customer Records	39,910	4,606	0	5,890	50,406
Insurance - General Liability	210	26	0	31	267
Bad Debt Expense	1,800	250	0	266	2,316
<b>ADMINISTRATIVE &amp; GENERAL</b>					
Mat'l. & Supplies and Misc.	2,335	320	0	345	3,000
Contr. Serv. - Audit & Legal	1,906	260	0	281	2,447
Contr. Serv. - Admin & Gen Sal.	11,692	1,454	0	1,726	14,872
Insurance - Gen. Liab. & Other	2,268	271	0	335	2,874
Regulatory Commission	0	0	0	0	0
<b>TOTAL OPERATING EXPENSE</b>	<b>\$438,666</b>	<b>\$103,361</b>	<b>\$0</b>	<b>\$87,174</b>	<b>\$629,201</b>

**PROFORMA ADJUSTMENT CONTINUED  
WATER SYSTEM ADDITIONS - PROJECT 11  
GRAYSON COUNTY WATER DISTRICT**

	EXISTING SYSTEM	CHANGES DUE TO PROJECT 10 AND WHOLESALE RATE INCREASE	CHANGES ON EXISTING SYSTEM FROM RATE INCREASE FOR PROJ. 11	CHANGES DUE TO NEW PROJECT 11 CUSTOMERS	TOTAL FUTURE SYSTEM AFTER PROJECT
<b>MAINTENANCE EXPENSE:</b>					
<b>PUMPING</b>					
Mat'l. & Supplies and Misc.	\$0	\$0	\$0	\$0	\$0
Contr. Serv. - Audit & Legal	503	163	0	302	968
Contr. Serv. - Pumping Equip.	255	106	0	153	514
<b>TRANSMISSION &amp; DISTRIBUTION</b>					
Mat'l. & Supplies and Misc.	0	0	0	0	0
Contr. Serv. - Audit & Legal	503	68	0	74	645
Contr. Serv. - Standpipes	6,414	0	0	0	6,414
Contr. Serv. - Mains	38,455	11,196	0	15,857	65,508
Contr. Serv. - Services	11,933	2,124	0	1,761	15,818
Contr. Serv. - Meters	8,809	2,312	0	1,300	12,421
Contr. Serv. - Hydrants	1,367	0	0	0	1,367
Contr. Serv. - Misc. Plant	163	0	0	0	163
Contr. Serv. - Scada	0	0	0	4,500	4,500
<b>TOTAL MAINTENANCE EXPENSE</b>	<b>\$68,402</b>	<b>\$15,969</b>	<b>\$0</b>	<b>\$23,947</b>	<b>\$108,318</b>
<b>DEPRECIATION EXPENSE</b>	<b>185,064</b>	<b>51,690</b>	<b>0</b>	<b>85,718</b>	<b>322,472</b>
<b>TAXES:</b>					
REGULATORY ASSESSMENT FEES	1,205	168	0	178	1,551
<b>PRINCIPAL &amp; INTEREST EXPENSE:</b>					
PRINCIPAL PAYMENT - FmHA	81,000	13,900	12,100 (2)	17,000	124,000
INTEREST PAYMENT - FmHA	265,950	75,000	(13,750)(2)	74,100	401,300
CONSUMER DEPOSITS - Interest	582	245	0	86	913
<b>TOTAL OPERATING &amp; MAINTENANCE EXPENSE AND OTHER</b>	<b>\$1,040,869</b>	<b>\$260,333</b>	<b>(\$1,650)</b>	<b>\$288,203</b>	<b>\$1,587,755</b>
<b>NET UTILITY OPERATING INCOME</b>	<b>\$128,496</b>	<b>(\$218)</b>	<b>\$114,329</b>	<b>(\$138,130)</b>	<b>\$104,477</b>

**NOTES:**

(1) INCLUDES WHOLESALE RATE INCREASE ON EXISTING SYSTEM & PROJECT 10. INCLUDES PROJECT 10 RATE INCREASE ON EXISTING CUSTOMERS AND NEW PROJECT 10 REVENUE.

PROJ 10 RATE & WHOLESALE RATE INCREASE ON EXIST. CUST.	\$138,856.00
PROJ 10 REVENUE	118,800.00
WHOLESALE RATE INCREASE ON PROJ 10 CUSTOMERS	2,459.00
	<u>\$260,115.00</u>

(2) REFLECTS CHANGES IN INTEREST AND PRINCIPLE PAYMENTS BETWEEN 1997 AND 2000

(3) PROJECT 11 RATE INCREASE ON EXISTING CUSTOMERS	102,799.00
PROJ 11 RATE INCREASE ON PROJ 10 CUSTOMERS	9,880.00
	<u>\$112,679.00</u>

(4) INCLUDES WHOLESALE WATER RATE INCREASE ON EXISTING & PROJ 10 CUSTOMERS.

APPENDIX



# Lincoln Trail District Health Department

P.O. BOX 2609, 1222 WOODLAND DRIVE  
ELIZABETHTOWN, KENTUCKY 42702-2609  
(502) 769-1601  
FAX (502) 765-7274

August 14, 1997

Alan H. Vilines, P.E.  
Grayson County Water District  
P.O. Box 1118  
Bowling Green KY 42102-1118

Dear Alan:

As an Environmentalist in Grayson County, it has been my experience that a large percentage of the wells and springs have been contaminated and will not meet EPA standards for drinking water. Approximately 70% of those tested this year had some degree of contamination. The potential for serious health problems for those people which are drinking this water is of a high magnitude. Grayson County needs to have safe drinking water available to as many citizens as possible.

Sincerely,

John S. Taylor  
Health Environmentalist

BRECKINRIDGE CO. HEALTH CENTER  
MAIN ST.  
HARDINSBURG, KENTUCKY 40143  
(502) 750-5127

GRAYSON CO. HEALTH CENTER  
124 EAST WHITE OAK ST  
LEITCHFIELD, KENTUCKY 42764  
(502) 250-3141

HARDY CO. HEALTH CENTER/TOWN  
500 WESTPORT ROAD  
ELIZABETHTOWN, KENTUCKY 42701  
(502) 765-6196

HARDY CO. HEALTH CENTER/RADCLIFF  
1482 NORTH WILSON  
RADCLIFF, KENTUCKY 40160  
(502) 362-2626

LARUE CO. HEALTH CENTER  
215 EAST MAIN ST.  
HODGENVILLE, KENTUCKY 42746  
(502) 359-3844

LINCOLN TRAIL OB CLINIC  
1013 WOODLAND DR.  
ELIZABETHTOWN, KENTUCKY 42701  
(502) 754-1131

MARION CO. HEALTH CENTER  
516 NORTH SPALDING AVE.  
LEBANON, KENTUCKY 40033  
(502) 682-3393

WEADE CO. HEALTH CENTER  
FAIRWAY DRIVE  
BRANDENBURG, KENTUCKY 40108  
(502) 422-3968

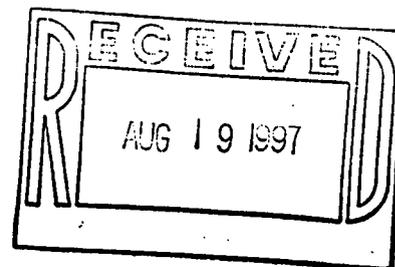
NELSON CO. HEALTH CENTER  
325 SOUTH THIRD  
BARSTOWN, KENTUCKY 42004  
(502) 349-3221

WASHINGTON CO. HEALTH CENTER  
302 EAST MAIN ST  
SPRINGFIELD, KENTUCKY 40369  
(606) 336-3660



# Leitchfield Pediatric Clinic, P.S.C.

Joseph M. Lee, M.D.  
Richard A. Boda, M.D.  
Nadyne S. Lee, A.R.N.P.



August 11, 1997

Mr. Alan Vilines  
Grayson County Water District  
PO Box 1118  
Bowling Green, KY 42102-1118

Dear Mr. Vilines:

I have been a Pediatrician in Grayson County for twenty-one years, and I am greatly interested in the proposed water lines for the Grayson County Water District. I have serious concerns about the safety of the water supply in Grayson County (we have a high percentage of contamination in wells and family water supplies tested). All the babies in the WIC Program have to prepare formula from concentrate and must use their own water supply. We have a significant number of children with diarrhea from enteric pathogens (salmonella and shigella) as well as giardia. A lesser problem but still significant is the number of children not receiving flouride in their family water resulting in an increase of dental problems.

The proposed water line extensions would alleviate many of the problems in the areas served and hence improve the health status of the community.

I strongly encourage the approval of this proposal.

Sincerely,

Joe M. Lee, M.D., F.A.A.P.

cc: John Taylor  
Grayson County Health Dept.

SUMMARY/ADDENDUM

TO

PRELIMINARY ENGINEERING REPORT

Dated August 20, 1997

FOR

Grayson County Water District - Project 11  
(Name of Water Facility Project)

Applicant Contact Person Alan H. Vilines, P.E.

Applicant Phone Number (502) 842-6541

In order to avoid unnecessary delays in application processing, the applicant and its consulting engineer should prepare a summary of the preliminary engineering report in accordance with this Guide. Feasibility review and grant determinations may be processed more accurately and more rapidly if the Summary/Addendum is submitted simultaneously with the preliminary engineering report, or as soon thereafter as possible.

1. General

A. Area to be Served: In addition to this summary, the applicant/engineer should submit a project map of the service area showing the following:

- |                  |  |
|------------------|--|
| Exhibit A        | 1. Existing Facilities Location and Size.                        |
| Attachment No. 1 | 2. Proposed Facilities Location and Size.                        |
|                  | 3. New User Location - Also attach a list of new users, by road. |
|                  | 4. Breakdown of project cost for each branch line.               |

II. FACILITY CHARACTERISTICS OF EXISTING WATER SYSTEM

- A. Water Source: Describe adequacy of source (quality and quantity). Include an explanation of raw water source, raw water intake structure, treatment plant capacity, and current level of production (WTP). Also describe the adequacy of Water Purchase Contract if applicable.

All water is purchased from the City of Leitchfield: raw water from Rough River Reservoir WTP: the WTP capacity is 2.6 mgd - peak production is approximately 1.6 mgd. The current water purchase contract extends for a term of 40 years from 1994 and provides for the purchase of 25,000,000 gallons/month and can be upgraded to 41,000,000 gallons /month. Average purchase will be approximately 19,253,000 gallons/month when Project 10 is completed in 1997.

If the applicant purchases water:

Seller(s): City of Leitchfield, Kentucky

Price/1,000 Gallons: 1.274

Present Estimated Market Value of Existing System: \$ 7,977,946

- B. Water Storage:

Type: Ground Storage Tank.  X  Elevated Tank  X   
Standpipe  X  Other

Number of Storage Structures

Total Storage Volume Capacity 1,039,000 gallons  
Date Storage Tank(s) Constructed 1978, 1982, 1989, 1994, 1995

- C. Water Distribution Systems

Pipe Material Polyvinyl Chloride (PVC)

Lineal Feet of Pipes 3" Diameter 25,450 4" 568,302 6" 574,538  
8" 83,530 10" 12,778

Date(s) Water Lines Constructed 1975 to present

Number and Capacity of Pump Station(s) Four pump stations: 1 at 120 gpm, 1 at 250 gpm, 1 at 150 gpm, 1 at 100 gpm. One pump station under construction at 300 gpm.

D. Condition of Existing Water System:

Briefly describe the condition and suitability for continued use of facility now owned by the applicant. Include any major renovation that will be needed within five to ten years.

THE EXISTING WATER SYSTEM IS IN EXCELLENT CONDITION AND WAS DESIGNED WITH ADEQUATE CAPACITY FOR THE PROPOSED ADDITIONS. NO RENOVATIONS ARE FORESEEN.

III. EXISTING LONG-TERM INDEBTEDNESS

A. List of Bonds and Notes:

<u>Date of Issue</u>	<u>Principal Balance</u>	<u>Principal Payment</u>	<u>Pymt Date</u>	<u>Bond/Note Holder</u>	<u>Amount on Deposit in Reserve Acct</u>
19 76 Issue	\$ 343,000	\$ 13,000	12/31/97	RD	11,757.59
19 77 Issue	\$ 216,000	\$ 6,000	12/31/97	RD	5,928.86
19 81 Issue	\$ 118,000	\$ 3,000	12/31/97	RD	3,051.50
19 85 Issue	\$ 237,000	\$ 4,000	12/31/97	RD	4,762.33
19 88 Issue	\$ 1,241,000	\$ 18,000	12/31/97	RD	22,949.68
1991 ISSUE	1,383,000	16,000	12/31/97	RD	22,836.58
1995 ISSUE	1,977,000	22,000	12/31/97	RD	30,335.73

IV. LAND AND RIGHTS - EXISTING SYSTEM(S)

Number of Treatment Plant Sites	_____
Number of Storage Tank Sites	6
Number of Pump Stations	5
Total Acreage	+2 Acres
Purchase Price	\$ 15,595

V. NUMBER OF EXISTING USERS (INCLUDING PROJECT 10 CUSTOMERS)

A. Water Users:

Residential Size Meters (In Town)*	_____
Residential Size Meters/Farmers (Out of Town)*	_____ 3,938
Larger Users (Larger Than 5/8" Meter (In Town))	_____
Larger Users (Larger Than 5/8" Meter (Out of Town))	_____ 46
Total	_____ 3,984
Number of Total Potential Users Living in the Service Area	_____ 4,600

\*NOTE: Residential/Farmers Users: Classify by type of user regardless of quantity of water used. This classification should include those meters serving individual rural residence size meters and farmers.

VI. CURRENT CONNECTION FEES FOR EACH SIZE METER CONNECTION

<u>Meter Size</u>	<u>Connection Fee</u>	<u>Minimum Water Usage for Each Size Meter</u>
<u>5/8" x 3/4"</u>	<u>\$ 450</u>	<u>1,500 gallons</u>
<u>1-Inch</u>	<u>\$ 550</u>	<u>5,000 gallons</u>
<u>1-1/2" Inch</u>	<u>\$ 1,150</u>	<u>10,000 gallons</u>
<u>2-Inch</u>	<u>\$ 1,300</u>	<u>16,000 gallons</u>
<u>3-Inch</u>	<u>\$ 4,000</u>	<u>30,000 gallons</u>
<u>4-Inch</u>	<u>\$ 4,600</u>	<u>50,000 gallons</u>
<u>5-Inch</u>	<u>\$ ---</u>	<u>--- gallons</u>
<u>6-Inch</u>	<u>\$ Actual Cost</u>	<u>100,000 gallons</u>
<u>8-Inch</u>	<u>\$ Actual Cost</u>	<u>160,000 gallons</u>
<u>10-Inch</u>	<u>\$ Actual Cost</u>	<u>550,000 gallons</u>

VII. WATER RATES - EXISTING RATE SCHEDULE

Date this rate went into effect: SEPTEMBER 1997

Meter Size 5/8" x 3/4":

First	<u>1,500</u>	Gallons @ \$	<u>12.75</u>	Minimum.
Next	<u>8,500</u>	Gallons @ \$	<u>5.64</u>	per 1,000 Gallons.
Next	<u>40,000</u>	Gallons @ \$	<u>4.65</u>	per 1,000 Gallons.
Next	<u>100,000</u>	Gallons @ \$	<u>3.88</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @ \$	<u>--</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @ \$	<u>--</u>	per 1,000 Gallons.
All Over	<u>150,000</u>	Gallons @ \$	<u>3.11</u>	per 1,000 Gallons.

Meter Size 3/4":

First	<u>3,000</u>	Gallons @ \$	<u>21.66</u>	Minimum.
Next	<u>7,000</u>	Gallons @ \$	<u>5.64</u>	per 1,000 Gallons.
Next	<u>40,000</u>	Gallons @ \$	<u>4.65</u>	per 1,000 Gallons.
Next	<u>100,000</u>	Gallons @ \$	<u>3.88</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @ \$	<u>--</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @ \$	<u>--</u>	per 1,000 Gallons.
All Over	<u>150,000</u>	Gallons @ \$	<u>3.11</u>	per 1,000 Gallons.

Meter Size 1":

First	<u>5,000</u>	Gallons @ \$	<u>33.41</u>	Minimum.
Next	<u>5,000</u>	Gallons @ \$	<u>5.64</u>	per 1,000 Gallons.
Next	<u>40,000</u>	Gallons @ \$	<u>4.65</u>	per 1,000 Gallons.
Next	<u>100,000</u>	Gallons @ \$	<u>3.88</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @ \$	<u>--</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @ \$	<u>--</u>	per 1,000 Gallons.
All Over	<u>150,000</u>	Gallons @ \$	<u>3.11</u>	per 1,000 Gallons.

VII. WATER RATES - EXISTING RATE SCHEDULE (Continued)

Date this rate went into effect: SEPTEMBER 1997

Meter Size 1-1/2":

First	<u>10,000</u>	Gallons @	\$ <u>67.18</u>	Minimum.
Next	<u>40,000</u>	Gallons @	\$ <u>4.65</u>	per 1,000 Gallons.
Next	<u>100,000</u>	Gallons @	\$ <u>3.88</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @	\$ <u>--</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @	\$ <u>--</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @	\$ <u>--</u>	per 1,000 Gallons.
All Over	<u>150,000</u>	Gallons @	\$ <u>3.11</u>	per 1,000 Gallons.

Meter Size 2":

First	<u>16,000</u>	Gallons @	\$ <u>96.46</u>	Minimum.
Next	<u>34,000</u>	Gallons @	\$ <u>4.65</u>	per 1,000 Gallons.
Next	<u>100,000</u>	Gallons @	\$ <u>3.88</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @	\$ <u>--</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @	\$ <u>--</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @	\$ <u>--</u>	per 1,000 Gallons.
All Over	<u>150,000</u>	Gallons @	\$ <u>3.11</u>	per 1,000 Gallons.

Meter Size 3":

First	<u>30,000</u>	Gallons @	\$ <u>186.69</u>	Minimum.
Next	<u>20,000</u>	Gallons @	\$ <u>4.65</u>	per 1,000 Gallons.
Next	<u>100,000</u>	Gallons @	\$ <u>3.88</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @	\$ <u>--</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @	\$ <u>--</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @	\$ <u>--</u>	per 1,000 Gallons.
All Over	<u>150,000</u>	Gallons @	\$ <u>3.11</u>	per 1,000 Gallons.

VII. WATER RATES - EXISTING RATE SCHEDULE (Continued)

Date this rate went into effect: SEPTEMBER 1997

Meter Size 4":

First	<u>50,000</u>	Gallons @ \$ <u>285.20</u>	Minimum.
Next	<u>100,000</u>	Gallons @ \$ <u>3.88</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @ \$ <u>--</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @ \$ <u>--</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @ \$ <u>--</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @ \$ <u>--</u>	per 1,000 Gallons.
All Over	<u>150,000</u>	Gallons @ \$ <u>3.11</u>	per 1,000 Gallons.

Meter Size 6":

First	<u>100,000</u>	Gallons @ \$ <u>529.41</u>	Minimum.
Next	<u>50,000</u>	Gallons @ \$ <u>3.88</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @ \$ <u>--</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @ \$ <u>--</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @ \$ <u>--</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @ \$ <u>--</u>	per 1,000 Gallons.
All Over	<u>150,000</u>	Gallons @ \$ <u>3.11</u>	per 1,000 Gallons.

Meter Size 8":

First	<u>160,000</u>	Gallons @ \$ <u>800.95</u>	Minimum.
Next	<u>--</u>	Gallons @ \$ <u>--</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @ \$ <u>--</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @ \$ <u>--</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @ \$ <u>--</u>	per 1,000 Gallons.
Next	<u>--</u>	Gallons @ \$ <u>--</u>	per 1,000 Gallons.
All Over	<u>160,000</u>	Gallons @ \$ <u>3.11</u>	per 1,000 Gallons.

VII. Existing Rate Schedule (Continued)

Meter Size 10":

First 550,000 Gallons @ \$ 2,010.79 Minimum.  
Next -- Gallons @ \$ -- per 1,000 Gallons.  
Next -- Gallons @ \$ -- per 1,000 Gallons.  
Next -- Gallons @ \$ -- per 1,000 Gallons.  
Next -- Gallons @ \$ -- per 1,000 Gallons.  
Next -- Gallons @ \$ -- per 1,000 Gallons.  
All Over 550,000 Gallons @ \$ 3.11 per 1,000 Gallons.

Meter Size N/A:

First            Gallons @ \$            Minimum.  
Next            Gallons @ \$            per 1,000 Gallons.  
All Over            Gallons @ \$            per 1,000 Gallons.

VIII. ANALYSIS OF ACTUAL WATER USAGE - EXISTING SYSTEM - 12 MONTH PERIOD

For Period JULY 1, 1996 to JUNE 30, 1997

Meter Size	MONTHLY WATER USAGE		Average	Residential/ Farmer		Non-Residential/ Commercial	
				No. of Users	Usage (1000)	No. of Users	Usage (1000)
	0 -	2,000 Gal.	1,000				
	2,000 -	3,000 Gal.	2,500				
	3,000 -	4,000 Gal.	3,500				
	4,000 -	5,000 Gal.	4,500				
	5,000 -	6,000 Gal.	5,500				
	6,000 -	7,000 Gal.	6,500				
5/8 x	7,000 -	8,000 Gal.	7,500				
	8,000 -	9,000 Gal.	8,500				
3/4	9,000 -	10,000 Gal.	9,500				
	10,000 -	11,000 Gal.	10,500				
Inch	11,000 -	12,000 Gal.	11,500				
	12,000 -	13,000 Gal.	12,500				
	13,000 -	14,000 Gal.	13,500				
	14,000 -	15,000 Gal.	14,500				
	15,000 -	16,000 Gal.	15,500				
	16,000 -	17,000 Gal.	16,500				
	17,000 -	18,000 Gal.	17,500				
	18,000 -	19,000 Gal.	18,500				
	19,000 -	20,000 Gal.	19,500				
	-	Gal.					
	-	Gal.					
	-	Gal.					
			Sub-Total	( )	( )	( )	( )
			Average Usage	( )	( )	( )	( )
		Gal.					
		Gal.					
1-Inch		Gal.					
		Gal.					
		Gal.					
		Gal.					
		Gal.					
			Sub-Total	( )	( )	( )	( )
		Gal.					
		Gal.					
1-1/2		Gal.					
		Gal.					
		Gal.					
Inch		Gal.					
			Sub-Total	( )	( )	( )	( )

Continued .....

VIII. continued .....

Meter Size	MONTHLY WATER USAGE		Average	Residential/ Farmer		Non- Residential/ Commercial	
		Gal.		No. of Users	Usage (1000)	No. of Users	Usage (1000)
2-Inch		Gal.					
		Gal.					
		Gal.					
		Gal.					
		Gal.					
		Sub-Total		( )	( )	( )	( )
3-Inch		Gal.					
		Gal.					
		Gal.					
		Gal.					
		Gal.					
		Sub-Total		( )	( )	( )	( )
4-Inch		Gal.					
		Gal.					
		Gal.					
		Gal.					
		Gal.					
		Sub-Total		( )	( )	( )	( )
5-Inch		Gal.					
		Gal.					
		Gal.					
		Gal.					
		Gal.					
		Sub-Total		( )	( )	( )	( )
6-Inch		Gal.					
		Gal.					
		Gal.					
		Gal.					
		Gal.					
		Sub-Total		( )	( )	( )	( )
		Total		( )	( )	( )	( )
Total Water Purchased and/or Produced							
Total Water Sold							

IX. FACILITY CHARACTERISTICS OF PROPOSED WATER SYSTEM

A. Water Source: Describe adequacy of source (quality and quantity). Include an explanation of raw water source, raw water intake structure, treatment plant capacity, and current level of production (WTP). Also describe the adequacy of Water Purchase Contract if applicable.

All water will be purchased from the City of Leitchfield. Grayson  
County Water District's current water purchase contract provides for  
the purchase of 25,000,000 gallons/month and can be upgraded to  
41,000,000 gallons/month. The proposed project will require an  
additional 1,729,217 gallons/month bringing total purchases to 20,982,700  
gallons/month.

B. Water Storage:

Type: Ground Storage Tank \_\_\_\_\_ Elevated Tank \_\_\_\_\_  
Standpipe \_\_\_\_\_ Other \_\_\_\_\_

Number of Storage Structures None

Total Storage Volume Capacity \_\_\_\_\_

C. Water Distribution System:

Pipe Material Polyvinyl Chloride (PVC)

Lineal Feet of Pipe: 3" Diameter \_\_\_\_\_ 4" 548,542 6" 40,950  
8" \_\_\_\_\_ 10" \_\_\_\_\_ 12" \_\_\_\_\_

Number and Capacity of Pump Station(s) Three booster pump stations  
at 75 GPM each.

X. LAND AND RIGHTS - PROPOSED WATER SYSTEM(S)

Number of Treatment Plant Sites \_\_\_\_\_  
Number of Pump Sites 3  
Number of Other Sites (Storage Tank) \_\_\_\_\_  
Total Acreage 1 Acres  
Purchase Price \$ 2,000

**XI. NUMBER OF NEW USERS**

**A. Water Users:**

Residential Size Meters (In Town)*	_____
Residential Size Meters/Farmers (Out of Town)*	_____ 488
Larger Users (Larger Than 5/8" Meter (In Town))	_____
Larger Users (Larger Than 5/8" Meter (Out of Town))	_____
Total	_____ 488
Number of Total Potential Users Living in the Service Area	Approx. _____ 600

\*NOTE: Residential/Farmers Users: Classify by type of user regardless of quantity of water used. This classification should include those meters serving individual rural residence size meter and farmers.

**XII. PROPOSED CONNECTION FEES FOR EACH SIZE METER CONNECTION**

Meter Size	Connection Fee	Minimum Water Usage for Each Size Meter
<u>5/8" x 3/4"</u>	\$ _____ 450	_____ 1,500 gallons
<u>1-Inch</u>	\$ _____ 550	_____ 5,000 gallons
<u>1-1/2" Inch</u>	\$ _____ 1,150	_____ 10,000 gallons
<u>2-Inch</u>	\$ _____ 1,300	_____ 16,000 gallons
<u>3-Inch</u>	\$ _____ 4,000	_____ 30,000 gallons
<u>4-Inch</u>	\$ _____ 4,600	_____ 50,000 gallons
<u>6-Inch</u>	\$ _____ ACTUAL COST	_____ 100,000 gallons
<u>8-Inch</u>	\$ _____ ACTUAL COST	_____ 200,000 gallons
<u>10-Inch</u>	\$ _____ ACTUAL COST	_____ 550,000 gallons

\*During initial sign-up period for Project 11, the connect fee for 5/8" x 3/4" meters will be \$225 and all other meters will be 1/2 of amount indicated.

XIII. WATER RATES - PROPOSED

A. Proposed Rate Schedule:

First	<u>1,500</u>	Gallons @ \$	<u>13.80</u>	Minimum.
Next	<u>8,500</u>	Gallons @ \$	<u>6.10</u>	per 1,000 Gallons.
Next	<u>40,000</u>	Gallons @ \$	<u>5.03</u>	per 1,000 Gallons.
Next	<u>100,000</u>	Gallons @ \$	<u>4.20</u>	per 1,000 Gallons.
Next	<u>          </u>	Gallons @ \$	<u>          </u>	per 1,000 Gallons.
Next	<u>          </u>	Gallons @ \$	<u>          </u>	per 1,000 Gallons.
All Over	<u>150,000</u>	Gallons @ \$	<u>3.37</u>	per 1,000 Gallons.

IF MORE THAN ONE RATE, USE ADDITIONAL SHEETS.

VIII. ANALYSIS OF ACTUAL WATER USAGE  
 XIV. FORECAST OF WATER USAGE - INCOME - EXISTING SYSTEM - EXISTING USERS

(INCLUDES 8.2% RATE INCREASE FOR PROJECT 11)

5/8" METERS:

USAGE/MON	AVG	AVG BILL	NO. BILLS	RESIDENTIAL			COMMERCIAL		
				USAGE	INCOME	NO. BILLS	USAGE	INCOME	
0 TO	2,000	680	13.80	12,786	8,694,480	\$176,447	1,072	728,960	\$14,794
2 TO	3,000	2,512	19.97	5,969	14,994,128	119,201	216	542,592	4,314
3 TO	4,000	3,497	25.98	5,891	20,600,827	153,048	119	416,143	3,092
4 TO	5,000	4,477	31.96	4,806	21,516,462	153,600	96	429,792	3,068
5 TO	6,000	5,466	37.99	3,395	18,557,070	128,976	93	508,338	3,533
6 TO	7,000	6,465	44.09	2,292	14,817,780	101,054	50	323,250	2,205
7 TO	8,000	7,468	50.20	1,490	11,127,320	74,798	38	283,784	1,908
8 TO	9,000	8,460	56.26	902	7,630,920	50,747	35	296,100	1,969
9 TO	10,000	9,477	62.46	583	5,525,091	36,414	20	189,540	1,249
10 TO	11,000	10,469	68.01	320	3,350,080	21,763	15	157,035	1,020
11 TO	12,000	11,462	73.00	210	2,407,020	15,330	20	229,240	1,460
12 TO	14,000	12,882	80.15	256	3,297,792	20,518	25	322,050	2,004
14 TO	16,000	14,966	90.63	146	2,185,036	13,232	18	269,388	1,631
16 TO	18,000	16,950	100.61	108	1,830,600	10,866	10	169,500	1,006
18 TO	20,000	18,960	110.72	97	1,839,120	10,740	10	189,600	1,107
20 TO	25,000	22,379	127.92	99	2,215,521	12,664	21	469,959	2,686
25 TO	30,000	27,102	151.67	61	1,653,222	9,252	17	460,734	2,578
30 TO	40,000	34,125	187.00	54	1,842,750	10,098	27	921,375	5,049
40 TO	50,000	45,089	242.15	47	2,119,183	11,381	15	676,335	3,632
50 TO	75,000	61,935	316.98	30	1,858,050	9,509	26	1,610,310	8,241
75 TO	100,000	84,713	412.64	27	2,287,251	11,141	8	677,704	3,301
100 TO	150,000	106,897	505.82	7	748,279	3,541	1	106,897	506
150 TO	200,000	153,210	697.67	4	612,840	2,791	0	0	0
200 TO	300,000	258,950	1054.01	1	258,950	1,054	1	258,950	1,054
300 TO	400,000	0	0.00	0	0	0	0	0	0
400 TO	500,000	0	0.00	0	0	0	0	0	0
500 TO	ABOVE	612,670	2246.05	1	612,670	2,246	0	0	0
SUBTOTALS				39,582	152,582,442	\$1,160,411	1,953	10,237,576	\$71,407
AVG. RATE									
AVG. USAGE					3,855			5,242	

3/4" METERS:

USAGE/MON	AVG	AVG BILL	NO. BILLS	RESIDENTIAL			COMMERCIAL		
				USAGE	INCOME	NO. BILLS	USAGE	INCOME	
0 TO	3,000	550	23.44	0	0	\$0	2	1,100	\$47
3 TO	4,000	3,800	28.32	0	0	0	3	11,400	85
4 TO	5,000	4,714	33.90	0	0	0	5	23,570	170
5 TO	6,000	5,580	39.18	0	0	0	2	11,160	78
6 TO	7,000	0	0.00	0	0	0	0	0	0
7 TO	8,000	0	0.00	0	0	0	0	0	0
8 TO	9,000	0	0.00	0	0	0	0	0	0
9 TO	10,000	0	0.00	0	0	0	0	0	0
10 TO	11,000	0	0.00	0	0	0	0	0	0
11 TO	12,000	0	0.00	0	0	0	0	0	0
12 TO	14,000	0	0.00	0	0	0	0	0	0
14 TO	16,000	0	0.00	0	0	0	0	0	0
16 TO	18,000	0	0.00	0	0	0	0	0	0
18 TO	20,000	0	0.00	0	0	0	0	0	0
20 TO	25,000	0	0.00	0	0	0	0	0	0
25 TO	30,000	0	0.00	0	0	0	0	0	0
30 TO	40,000	0	0.00	0	0	0	0	0	0
40 TO	50,000	0	0.00	0	0	0	0	0	0
50 TO	ABOVE	0	0.00	0	0	0	0	0	0
SUBTOTALS				0	0	\$0	12	47,230	\$380

1" METERS

USAGE/MON	AVG	RESIDENTIAL			COMMERCIAL			
		AVG BILL	NO. BILLS	USAGE	INCOME	NO. BILLS	USAGE	INCOME
0 TO 5,000	2,156	36.15	36	77,616	1,301	47	101,332	1,699
5 TO 6,000	5,390	38.53	4	21,560	154	4	21,560	154
6 TO 7,000	6,536	45.52	11	71,896	501	9	58,824	410
7 TO 8,000	7,534	51.61	3	22,602	155	5	37,670	258
8 TO 9,000	8,573	57.95	3	25,719	174	12	102,876	695
9 TO 10,000	9,418	63.10	1	9,418	63	7	65,926	442
10 TO 11,000	10,471	69.02	0	0	0	8	83,768	552
11 TO 12,000	11,517	74.28	2	23,034	149	8	92,136	594
12 TO 14,000	12,980	81.64	1	12,980	82	10	129,800	816
14 TO 16,000	15,036	91.98	2	30,072	184	9	135,324	828
16 TO 18,000	16,648	100.09	7	116,536	701	3	49,944	300
18 TO 20,000	19,237	113.11	2	38,474	226	4	76,948	452
20 TO 25,000	22,178	127.91	8	177,424	1,023	19	421,382	2,430
25 TO 30,000	27,420	154.27	4	109,680	617	12	329,040	1,851
30 TO 40,000	34,114	187.94	3	102,342	564	9	307,026	1,691
40 TO 50,000	43,902	237.18	5	219,510	1,186	8	351,216	1,897
50 TO 75,000	63,369	324.00	2	126,738	648	8	506,952	2,592
75 TO 100,000	86,142	419.65	0	0	0	6	516,852	2,518
100 TO 150,000	122,391	571.89	2	244,782	1,144	22	2,692,602	12,582
150 TO 200,000	172,769	742.23	0	0	0	8	1,382,152	5,938
200 TO 300,000	212,735	876.92	0	0	0	2	425,470	1,754
300 TO 400,000	0	0.00	0	0	0	0	0	0
400 TO 500,000	0	0.00	0	0	0	0	0	0
500 TO ABOVE	0	0.00	0	0	0	0	0	0
SUBTOTALS			96	1,430,383	\$8,872	220	7,888,800	\$40,453

1 1/2" METERS:

USAGE/MON	AVG	RESIDENTIAL			COMMERCIAL			
		AVG BILL	NO. BILLS	USAGE	INCOME	NO. BILLS	USAGE	INCOME
0 TO 10,000	6,857	72.69	0	0	0	3	20,571	218
10 TO 11,000	10,367	74.54	0	0	0	3	31,101	224
11 TO 12,000	0	0.00	0	0	0	0	0	0
12 TO 14,000	13,033	87.95	0	0	0	3	39,099	264
14 TO 16,000	14,801	96.84	0	0	0	1	14,801	97
16 TO 18,000	17,150	108.65	0	0	0	2	34,300	217
18 TO 20,000	0	0.00	0	0	0	0	0	0
20 TO 25,000	0	0.00	0	0	0	0	0	0
25 TO 30,000	0	0.00	0	0	0	0	0	0
30 TO 40,000	0	0.00	0	0	0	0	0	0
40 TO 50,000	0	0.00	0	0	0	0	0	0
50 TO 75,000	0	0.00	0	0	0	0	0	0
75 TO 100,000	0	0.00	0	0	0	0	0	0
100 TO 150,000	138,000	643.49	0	0	0	3	414,000	1,930
150 TO 200,000	184,500	810.16	0	0	0	6	1,107,000	4,861
200 TO 300,000	210,000	896.09	0	0	0	3	630,000	2,688
300 TO 400,000	0	0.00	0	0	0	0	0	0
400 TO 500,000	0	0.00	0	0	0	0	0	0
500 TO ABOVE	0	0.00	0	0	0	0	0	0
SUBTOTALS			0	0	\$0	24	2,290,872	\$10,499

2" METERS:

USAGE/MON	AVG	RESIDENTIAL			COMMERCIAL			
		AVG BILL	NO. BILLS	USAGE	INCOME	NO. BILLS	USAGE	INCOME
0 TO 16,000	6,007	104.37	0	0	0	71	426,497	7,410
16 TO 18,000	16,200	105.38	0	0	0	2	32,400	211
18 TO 20,000	18,700	117.95	0	0	0	2	37,400	236
20 TO 25,000	22,917	139.16	0	0	0	6	137,502	835
25 TO 30,000	27,960	164.53	0	0	0	5	139,800	823
30 TO 40,000	33,067	190.22	0	0	0	9	297,603	1,712
40 TO 50,000	44,233	246.38	0	0	0	9	398,097	2,217
50 TO 75,000	60,133	317.95	0	0	0	12	721,596	3,815
75 TO 100,000	85,050	422.60	0	0	0	4	340,200	1,690
100 TO 150,000	125,433	571.10	0	0	0	12	1,505,196	6,853
150 TO 200,000	177,250	745.72	0	0	0	2	354,500	1,491
200 TO 300,000	226,900	913.04	0	0	0	3	680,700	2,739
300 TO 400,000	362,140	1368.80	0	0	0	10	3,621,400	13,688
400 TO 500,000	410,600	1532.11	0	0	0	1	410,600	1,532
500 TO 750,000	0	0.00	0	0	0	0	0	0
750 TO 1.0 M	0	0.00	0	0	0	0	0	0
1.0 TO 1.5 M	0	0.00	0	0	0	0	0	0
1.5 TO ABOVE	0	0.00	0	0	0	0	0	0
SUBTOTALS			0	0	\$0	148	9,103,491	\$45,252

3" METERS:

USAGE/MON	AVG	RESIDENTIAL			COMMERCIAL			
		AVG BILL	NO. BILLS	USAGE	INCOME	NO. BILLS	USAGE	INCOME
0 TO 30,000	10,218	202.00	0	0	0	11	112,398	2,222
30 TO 40,000	30,600	205.02	0	0	0	1	30,600	205
40 TO 50,000	0	0.00	0	0	0	0	0	0
50 TO 75,000	0	0.00	0	0	0	0	0	0
75 TO 100,000	0	0.00	0	0	0	0	0	0
100 TO 150,000	0	0.00	0	0	0	0	0	0
150 TO 200,000	0	0.00	0	0	0	0	0	0
200 TO 300,000	0	0.00	0	0	0	0	0	0
300 TO 400,000	0	0.00	0	0	0	0	0	0
400 TO 500,000	0	0.00	0	0	0	0	0	0
500 TO 750,000	0	0.00	0	0	0	0	0	0
750 TO 1.0 M	0	0.00	0	0	0	0	0	0
1.0 TO 1.5 M	0	0.00	0	0	0	0	0	0
1.5 TO ABOVE	0	0.00	0	0	0	0	0	0
SUBTOTALS			0	0	0	12	142,998	\$2,427

4" METERS:

USAGE/MON	AVG	RESIDENTIAL			COMMERCIAL			
		AVG BILL	NO. BILLS	USAGE	INCOME	NO. BILLS	USAGE	INCOME
0 TO 50,000	26,807	308.59	0	0	0	12	321,684	3,703
50 TO 75,000	0	0.00	0	0	0	0	0	0
75 TO 100,000	0	0.00	0	0	0	0	0	0
100 TO 150,000	0	0.00	0	0	0	0	0	0
150 TO 200,000	0	0.00	0	0	0	0	0	0
200 TO 300,000	0	0.00	0	0	0	0	0	0
300 TO 400,000	0	0.00	0	0	0	0	0	0
400 TO 500,000	0	0.00	0	0	0	0	0	0
500 TO 750,000	0	0.00	0	0	0	0	0	0
750 TO 1.0 M	0	0.00	0	0	0	0	0	0
1.0 TO 1.5 M	0	0.00	0	0	0	0	0	0
1.5 TO ABOVE	0	0.00	0	0	0	0	0	0
SUBTOTALS			0	0	0	12	321,684	\$3,703

**6" METERS:**

				RESIDENTIAL			COMMERCIAL		
USAGE/MON		AVG	AVG BILL	NO. BILLS	USAGE	INCOME	NO. BILLS	USAGE	INCOME
0 TO	100,000	4,458	572.82	0	0	0	24	106,992	13,748
100 TO	150,000	0	0.00	0	0	0	0	0	0
150 TO	200,000	0	0.00	0	0	0	0	0	0
200 TO	300,000	0	0.00	0	0	0	0	0	0
300 TO	400,000	0	0.00	0	0	0	0	0	0
400 TO	500,000	0	0.00	0	0	0	0	0	0
500 TO	750,000	0	0.00	0	0	0	0	0	0
750 TO	1.0 M	0	0.00	0	0	0	0	0	0
1.0 TO	1.5 M	0	0.00	0	0	0	0	0	0
1.5 TO	2.0 M	0	0.00	0	0	0	0	0	0
2.0 TO	2.5 M	0	0.00	0	0	0	0	0	0
2.5 TO	3.0 M	0	0.00	0	0	0	0	0	0
3.0 TO	4.0 M	0	0.00	0	0	0	0	0	0
4.0 TO	5.0 M	0	0.00	0	0	0	0	0	0
5.0 TO	ABOVE	0	0.00	0	0	0	0	0	0
SUBTOTALS				0	0	\$0	24	106,992	\$13,748

TOTALS				39,678	154,012,825	1,169,283	2,405	30,139,643	187,869
TOTAL CUSTOMERS				3,307			200		
AVG. CONSUMPTION PER MONTH					3,882			12,532	

ANNUAL WATER SOLD					154,012,825			30,139,643	
ANNUAL WATER PURCH. OR PROD.					175,802,300			34,403,800	
ANNUAL REVENUE						\$1,169,283			\$187,869

TOTAL ANNUAL WATER SOLD					184,152,468				
TOTAL ANNUAL WATER PURCH. OR PROD.					210,206,100				
TOTAL ANNUAL REVENUE						\$1,357,152			

VIII. ANALYSIS OF ACTUAL WATER USAGE  
 XIV. FORECAST OF WATER USAGE - INCOME - EXISTING SYSTEM

PROJECT 10 CUSTOMERS CURRENTLY UNDER CONSTRUCTION

5/8 X 3/4 INCH METER

MONTHLY WATER USAGE			Average	Average Bill	No. of Users	Residential/ Farmer Usage	Income	No. of Users	Non-Residential/ Commercial Usage	Income
0 -	2,000	Gal.	1,498	13.80	229	4,116,504	\$37,922	0	0	\$0
2,000 -	3,000	Gal.	2,509	19.95	75	2,258,100	17,955	0	0	0
3,000 -	4,000	Gal.	3,497	25.98	55	2,308,020	17,147	0	0	0
4,000 -	5,000	Gal.	4,485	32.01	39	2,098,980	14,981	0	0	0
5,000 -	6,000	Gal.	5,477	38.06	31	2,037,444	14,158	0	0	0
6,000 -	7,000	Gal.	6,466	44.09	24	1,862,208	12,698	0	0	0
7,000 -	8,000	Gal.	7,474	50.24	10	896,880	6,029	0	0	0
8,000 -	9,000	Gal.	8,484	56.40	7	712,656	4,738	0	0	0
9,000 -	10,000	Gal.	9,477	62.46	4	454,896	2,998	0	0	0
10,000 -	11,000	Gal.	10,492	68.12	2	251,808	1,635	0	0	0
11,000 -	12,000	Gal.	11,509	73.24	1	138,108	879	0	0	0
12,000 -	14,000	Gal.	0	0.00	0	0	0	0	0	0
14,000 -	16,000	Gal.	0	0.00	0	0	0	0	0	0
16,000 -	18,000	Gal.	0	0.00	0	0	0	0	0	0
18,000 -	20,000	Gal.	0	0.00	0	0	0	0	0	0
20,000 -	25,000	Gal.	0	0.00	0	0	0	0	0	0
25,000 -	30,000	Gal.	0	0.00	0	0	0	0	0	0
30,000 -	40,000	Gal.	0	0.00	0	0	0	0	0	0
40,000 -	50,000	Gal.	0	0.00	0	0	0	0	0	0
50,000 -	75,000	Gal.	0	0.00	0	0	0	0	0	0
75,000 -	100,000	Gal.	0	0.00	0	0	0	0	0	0
100,000 &	ABOVE	Gal.	0	0.00	0	0	0	0	0	0
ANNUAL TOTALS					477	17,135,604	\$131,139	0	0	\$0
AVG. RATE				\$7.65						
AVG. USAGE					2,994					

XVI. CURRENT OPERATING BUDGET - (As of the last full operating year)  
 (July 1996 to June 1997)

A. Operating Income:

Water Sales	\$ 1,375,612
Disconnect/Reconnect/Late Charge Fees	<u>33,076</u>
Other (Describe)	<u>105</u>
Less Allowances and Deductions	( _____ )
Total Operating Income.....	\$ <u>1,408,793</u>

B. Operation and Maintenance Expenses:  
 (Based on Uniform System of Accounts prescribed by National  
 Association of Regulatory Utility Commissioners)

Source of Supply Expense	\$ 294,544
Pumping Expense	<u>13,154</u>
Water Treatment Expense	<u>0</u>
Transmission and Distribution Expense	<u>199,174</u>
Customer Accounts Expense	<u>99,020</u>
Administrative and General Expense	<u>22,706</u>
Total Operating Expenses.....	\$ <u>628,598</u>
Net Operating Income.....	\$ <u>780,195</u>

C. Non-Operating Income:

Interest on Deposits	\$ 20,687
Other (Identify)	<u>          </u>
Total Non-Operating Income.....	\$ <u>20,687</u>

D. Net Income.....\$ 800,882

E. Debt Repayment:

FmHA Interest	\$ 340,950
FmHA Principal	<u>94,900</u>
Non-FmHA Interest	<u>          </u>
Non-FmHA Principal	<u>          </u>
Total Debt Repayment	\$ <u>435,850</u>

F. Balance Available for Coverage and Depreciation...\$ 365,032

ABOVE FIGURES INCLUDE PROJECT 10 WHICH IS CURRENTLY UNDER CONSTRUCTION

XVII. PROPOSED OPERATING BUDGET - EXISTING & NEW USERS  
 (1st Full Year of Operation) Year Ending 2000

A. Operating Income:

Water Sales	\$ 1,638,266
Disconnect/Reconnect/Late Charge Fees	<u>33,076</u>
Other (Describe)	<u>105</u>
Less Allowances and Deductions	( _____ )
Total Operating Income.....	<u>\$ 1,671,407</u>

B. Operation and Maintenance Expenses:  
 (Based on Uniform System of Accounts prescribed by National Association of Regulatory Utility Commissioners)

Source of Supply Expense	\$ 322,329
Pumping Expense	<u>21,109</u>
Water Treatment Expense	<u>0</u>
Transmission and Distribution Expense	<u>253,723</u>
Customer Accounts Expense	<u>111,794</u>
Administrative and General Expense	<u>25,657</u>
Total Operating Expenses.....	<u>\$ 734,612</u>
Net Operating Income.....	<u>\$ 936,795</u>

C. Non-Operating Income:

Interest on Deposits	\$ 20,687
Other (Identify)	<u>          </u>
Total Non-Operating Income.....	<u>\$ 20,687</u>

D. Net Income.....\$ 957,482

E. Debt Repayment:

FmHA Interest	\$ 401,300
FmHA Principal	<u>124,000</u>
Non-FmHA Interest	<u>          </u>
Non-FmHA Principal	<u>          </u>
Total Debt Repayment	<u>\$ 525,300</u>

F. Balance Available for Coverage and Depreciation...\$ 432,182

XVIII. PROPOSED OPERATING BUDGET - NEW USERS - EXTENSION ONLY  
 (1st Full Year of Operation) Year Ending 2000

A. Operating Income:

Water Sales	\$ <u>150,073</u>
Disconnect/Reconnect/Late Charge Fees	<u>0</u>
Other (Describe)	<u>0</u>
Less Allowances and Deductions	( <u>          </u> )
Total Operating Income.....	\$ <u>150,073</u>

B. Operation and Maintenance Expenses:  
 (Based on Uniform System of Accounts prescribed by National Association of Regulatory Utility Commissioners)

Source of Supply Expense	\$ <u>27,785</u>
Pumping Expense	<u>7,955</u>
Water Treatment Expense	<u>0</u>
Transmission and Distribution Expense	<u>54,549</u>
Customer Accounts Expense	<u>12,774</u>
Administrative and General Expense	<u>2,951</u>
Total Operating Expenses.....	\$ <u>106,014</u>
Net Operating Income.....	\$ <u>44,059</u>

C. Non-Operating Income:

Interest on Deposits	\$ <u>0</u>
Other (Identify)	<u>          </u>
Total Non-Operating Income.....	\$ <u>0</u>

D. Net Income.....\$ 44,059

E. Debt Repayment:

FmHA Interest	\$ <u>74,100</u>
FmHA Principal	<u>17,000</u>
Non-FmHA Interest	<u>          </u>
Non-FmHA Principal	<u>          </u>
Total Debt Repayment	\$ <u>91,000</u>

F. Balance Available for Coverage and Depreciation...\$ (47,041)

XIX. ESTIMATED PROJECT COST - WATER

Development	\$ 3,628,000
Land and Rights	20,000
Legal	21,900
Engineering	293,800
Interest	81,500
Contingencies	205,700
Initial Operating and Maintenance	
Other	35,000
TOTAL	4,285,900

XX. PROPOSED PROJECT FUNDING

Applicant - User Connection Fees	\$ 109,800
Other Applicant Contribution	
FmHA Loan	1,646,600
FmHA Grant	2,529,500
Other (Specify)	
TOTAL	\$ 4,285,900

**AREAS EXPRESSING INTEREST IN WATER  
LINE EXTENSIONS  
GRAYSON COUNTY WATER DISTRICT**

COST PER HOME	LINE I.D.	LINE NAME	LINE SIZE	LENGTH	EXIST	FULL-TIME	PROJECT COST	CUMULATIVE PROJECT COST	FULL-TIME CUM. HOMES	RATE
					FULL-TIME HOMES	HOMES REQ'D				INCREASE REQ'D. FOR PROJECT
<b>LINES WITH HOMES:</b>										
3,567	D25	Mt. Zion Road	4	1,400	4	3	10,700	10,700	3	0.06%
3,620	B43	Holiday Rough Road	4	950	2	2	7,240	17,940	5	0.09%
5,235	B28	Skeese Rd.	4	1,450	3	2	10,470	28,410	7	0.16%
5,398	D1	Wortham Cemetary Road	4	3,000	5	4	21,590	50,000	11	0.28%
5,560	B45	Braton Road	4	1,550	3	2	11,120	61,120	13	0.35%
5,720	C25	Armes Lively Road	4	1,600	2	2	11,440	72,560	15	0.41%
5,720	A35a	Shores Road	4	800	1	1	5,720	78,280	16	0.45%
6,045	A35	Duff Rd. / Shores Rd.	4	15,300	22	18	108,810	187,090	34	1.09%
6,045	A24	Jonnie Frank Rd.	4	3,400	5	4	24,180	211,270	38	1.23%
6,380	B49	Omer Drive & Elmore Road	4	5,410	8	6	38,280	249,550	44	1.46%
6,693	B6	Holly - Hilton Hill Rd.	4	3,800	5	4	26,770	276,320	48	1.62%
7,743	A35e	Concord Road	4	4,450	5	4	30,970	307,290	52	1.80%
8,307	B5	Conklin School Rd.	4	3,600	4	3	24,920	332,210	55	1.96%
8,500	B43a	Holiday Rough Road	4	2,460	3	2	17,000	349,210	57	2.06%
8,523	D24	Gibson Lane	4	3,700	4	3	25,570	374,780	60	2.22%
8,630	B25	Delk Lane	4	2,500	2	2	17,260	392,040	62	2.32%
8,659	A37	Four Seasons Autumn Ridge Rd.	4	8,780	9	7	60,610	452,650	69	2.69%
8,696	B6a	Holly Hinton Mill Road & Eanes Road	4	6,300	6	5	43,480	496,130	74	2.96%
8,793	B15	Narrows Rd.	4	5,100	5	4	35,170	531,300	78	3.17%
9,115	A28	Yeaman Olaton Rd.	4	2,650	2	2	18,230	549,530	80	3.28%
9,600	A35h	Duff Road	4	4,200	4	3	28,800	578,330	83	3.46%
9,602	B11	Coy Drane Rd.	4	7,000	6	5	48,010	626,340	88	3.75%
9,608	A25	Yeaman Olaton-Jugville Area	4	35,700	4	5	230,840	857,180	88	5.32%
9,606			6	40,950	79	63	374,310	1,231,490	151	7.42%
9,925	D15	McClure Rd.	4	5,800	5	4	39,700	1,271,190	155	7.66%
10,140	A35b	Concord Road	4	4,450	4	3	30,420	1,301,610	158	7.84%
10,250	A32	Thommason Cem. Rd.	4	3,000	2	2	20,500	1,322,110	160	7.96%
10,375	B7A	Morrison Clifty Conder Rd.	4	3,040	2	2	20,750	1,342,860	162	8.09%
10,463	C11	Cook Rd.	4	9,200	7	6	62,780	1,405,640	168	8.47%
10,636	B9	Beaver Dam Creek W	4	7,800	6	5	53,180	1,458,820	173	8.79%
10,735	C26	McStouts Road	4	3,150	2	2	21,470	1,480,290	175	8.92%
11,051	A19	Junction Rd. Lone Hill Rd. (incl. Pump Sta.)	4	25,200	24	19	209,970	1,690,260	194	10.18%
11,220	D8	Grindstone Road	4	3,300	2	2	22,440	1,712,700	196	10.31%
11,327	C14	Renfrow Rd.	4	5,000	4	3	33,980	1,746,680	199	10.52%
11,540	D14A	Byrtle Grove Rd.	4	3,400	3	2	23,080	1,769,760	201	10.65%
11,670	B27	Big Clifty Rd.	4	8,600	6	5	58,350	1,828,110	206	11.00%
12,510	B40	Old Hartford Rd.	4	1,850	1	1	12,510	1,840,620	207	11.08%
12,510	D21	Hooper Barton Rd.	4	1,850	1	1	12,510	1,853,130	208	11.16%
12,830	A44	Elmer Geary Road	4	1,900	1	1	12,830	1,865,960	209	11.23%
12,835	A23	Locust Hill Rd.	4	3,800	2	2	25,670	1,891,630	211	11.39%
12,995	D7	Progress Rd. Area	4	7,700	5	4	51,980	1,943,610	215	11.70%
13,050	C7	Pleasant View Ch. Rd.	4	5,800	4	3	39,150	1,982,760	218	11.94%
13,480	A35c	Rockledge Road	4	2,000	1	1	13,480	1,996,240	219	12.02%
13,480	A10	Adams Lane	4	2,000	1	1	13,480	2,009,720	220	12.10%
13,805	B35	Hickory Flats Rd.	4	4,100	3	2	27,610	2,037,330	222	12.27%
13,965	A14	Yeaman Rd.	4	8,300	5	4	55,860	2,093,190	226	12.61%
14,130	D2	Old Buzzard Roost Road	4	2,100	1	1	14,130	2,107,320	227	12.69%
14,343	A34	Panther Creek Rd.	4	6,400	4	3	43,030	2,150,350	230	12.96%
14,770	D13	Hickory Flats - Annie Boone Rd.	4	2,200	1	1	14,770	2,165,120	231	13.05%
14,775	C9	Pleasant View Ch. Rd.	4	4,400	3	2	29,550	2,194,670	233	13.22%
14,775	C8	Pleasant View Ch. Rd.	4	4,400	2	2	29,550	2,224,220	235	13.40%
15,033	A36	Beachamp Cem. Rd.	4	8,960	5	4	60,130	2,284,350	239	13.77%
15,260	A27	Free Zion Rd.	4	4,550	2	2	30,520	2,314,870	241	13.96%
15,420	A8	Lahue Cemetary Rd.	4	2,300	1	1	15,420	2,330,290	242	14.05%
15,420	A21	Dude Decker Rd.	4	2,300	1	1	15,420	2,345,710	243	14.14%
15,740	B23b	Summit Road	4	2,350	1	1	15,740	2,361,450	244	14.24%
16,065	A30	Richland Rd.	4	4,800	3	2	32,130	2,393,580	246	14.43%
16,065	A11	Hwy 736 Cummins Rd.	4	4,800	2	2	32,130	2,425,710	248	14.63%
16,230	D20	Branch Road	4	4,850	3	2	32,460	2,458,170	250	14.83%
16,390	B18a	Spurrer Road	4	4,900	3	2	32,780	2,490,950	252	15.03%
16,390	A12	Ridge Rd.	4	4,900	3	2	32,780	2,523,730	254	15.23%
16,633	C17	Big Ready Rd.	4	9,950	5	4	66,530	2,590,260	258	15.63%
16,710	B15A	Narrows Rd.	4	2,500	1	1	16,710	2,606,970	259	15.73%
16,710	B13A	Barton Run Rd.	4	2,500	1	1	16,710	2,623,680	260	15.83%
16,710	B6b	Holly Hinton Mill Road	4	2,500	1	1	16,710	2,640,390	261	15.94%
16,715	A24a	Johnny Frank Road	4	5,000	2	2	33,430	2,673,820	263	16.14%
17,360	A35D	Wilson Cemetary Rd.	4	2,600	1	1	17,360	2,691,180	264	16.24%
17,793	C16	Ready Jackson Rd.	4	8,000	4	3	53,380	2,744,560	267	16.57%
18,850	A34B	Alterhouse Lane	4	2,830	1	1	18,850	2,763,410	268	16.69%
19,300	C15	Coates Farris Rd.	4	2,900	1	1	19,300	2,782,710	269	16.80%
19,300	C21	Sadler Lane	4	8,700	4	3	57,900	2,840,610	272	17.16%
19,723	C24	Bowling Green Rd. (includes Pump Sta.)	4	6,200	5	4	78,890	2,919,500	276	17.64%

**AREAS EXPRESSING INTEREST IN WATER  
LINE EXTENSIONS  
GRAYSON COUNTY WATER DISTRICT**

COST PER HOME	LINE I.D.	LINE NAME	LINE SIZE	LENGTH	EXIST FULL-TIME HOMES	FULL-TIME HOMES REQ'D	PROJECT COST	CUMULATIVE PROJECT COST	FULL-TIME CUM. HOMES	RATE INCREASE REQ'D. FOR PROJECT
19,945	A5	Shartzter Rd.	4	6,000	2	2	39,890	2,959,390	278	17.89%
19,950	D23	Miller Road	4	3,000	1	1	19,950	2,979,340	279	18.01%
19,950	B50	Vanmeter Lane	4	3,000	1	1	19,950	2,999,290	280	18.13%
20,270	B30	Williams Lane & Keller School Rd.	4	6,100	3	2	40,540	3,039,830	282	18.38%
20,590	A1	Green Meadows Rd.	4	3,100	1	1	20,590	3,060,420	283	18.50%
20,920	C5	R. Smith Road	4	3,150	1	1	20,920	3,081,340	284	18.63%
21,730	D9	Sims Rd.	4	6,552	3	2	43,460	3,124,800	286	18.90%
21,885	B19	Mt. Zion Rd.	4	6,600	2	2	43,770	3,168,570	288	19.17%
21,885	A13	Owensboro Rd. Hwy 54	4	6,600	3	2	43,770	3,212,340	290	19.44%
22,530	D12	Forrester Rd.	4	3,400	1	1	22,530	3,234,870	291	19.58%
22,535	D21A	Hooper Barton Rd./Carroll Rd.	4	6,800	3	2	45,070	3,279,940	293	19.85%
23,310	D3	Hwy 479 (includes Pump Station)	4	4,900	4	3	69,930	3,349,870	296	20.28%
23,500	B1	Butler Rd.	4	3,550	1	1	23,500	3,373,370	297	20.43%
23,830	B7b	Morrison Clifty Road	4	3,600	1	1	23,830	3,397,200	298	20.57%
23,830	C22	Cedar Lane	4	3,600	1	1	23,830	3,421,030	299	20.72%
24,150	C3	Blackrock Rd.	4	7,300	2	2	48,300	3,469,330	301	21.02%
25,120	A26	Olaton Rd. Fallen Rock	4	11,400	4	3	75,360	3,544,690	303	21.49%
25,725	B48	Sam Kilt Road (includes Master Meter)	4	5,900	2	2	51,450	3,596,140	305	21.81%
26,410	D10A	Higdon Rd.	4	4,000	1	1	26,410	3,622,550	306	21.97%
26,410	B31	Franklin Drive	4	4,000	1	1	26,410	3,648,960	307	22.13%
27,710	D6	Fields Lane	4	4,200	1	1	27,710	3,676,670	308	22.31%
30,290	B18b	Shaw Creek Road	4	4,600	1	1	30,290	3,706,960	309	22.49%
30,940	A15	Lone Hill Rd. S	4	4,700	1	1	30,940	3,737,900	310	22.69%
38,050	D5	Sammy Powell Rd.	4	5,800	1	1	38,050	3,775,950	311	22.92%
44,520	D8a	Grindstone Road	4	13,600	3	2	89,040	3,864,990	313	23.49%
SUBTOTAL			FOOTAGE MILES	540,632 102.4		313	\$3,864,990			

COST PER HOME	LINE I.D.	LINE NAME	LINE SIZE	LENGTH	PART-TIME HOMES	EXISTING FULL-TIME HOMES	PROJECT COST	CUMULATIVE PROJECT COST	PART-TIME CUM. HOMES	RATE INCREASE REQ'D. FOR PROJECT
LINES FOR PART-TIME RESIDENTS ONLY:										
	A34c	Alterhouse Lane	4	200	4	0	2,940	3,867,930	3	23.50%
	A42	Bessie Lane	4	1,000	21	0	16,350	3,884,280	21	23.59%
	A39A	Burr Oak Rolling Bottom Rd.	4	1,200	13	0	13,800	3,898,080	32	23.67%
	A41	Carter Lane	4	850	8	0	9,340	3,907,420	39	23.73%
	A36A	Beauchamp Cemetary Road Area	4	1,800	12	0	17,130	3,924,550	49	23.83%
	A37A	Four Seasons/Autumn Ridge	4	3,600	19	0	32,060	3,956,610	65	24.03%
	A33	Indian Valley	4	9,460	50	0	84,780	4,041,390	108	24.54%
	A35G	Concord Point Shores Road Area	4	10,800	37	0	86,850	4,110,880	139	24.95%
	A38	County Rd off Hwy 736	4	1,350	2	0	38,820	4,149,700	146	25.20%
	B15B	Narrows Rd.	4	1,000	3	0	8,110	4,157,810	149	25.25%
	B3	Lake Shore Rd.	4	6,600	18	0	50,910	4,208,720	164	25.56%
	A24B	Johnny Frank Rd.	4	1,550	3	0	11,670	4,220,390	167	25.63%
	A31A	Kendall Rd.	4	600	1	0	4,430	4,224,820	168	25.66%
	A8A	Lahue Cemetary Rd.	4	600	1	0	4,430	4,229,250	169	25.68%
	A32A	Thommason Cemetary Rd.	4	2,550	4	0	18,140	4,247,390	172	25.80%
	D11A	Logsdon Cemetary Rd.	4	3,300	2	0	22,440	4,269,830	174	25.94%
	A20	Junction Road	4	2,400	1	0	16,070	4,285,900	175	26.04%
SUBTOTAL			FOOTAGE MILES	48,860 9.3			\$420,910			
CUMULATIVE SUBTOTAL			FOOTAGE MILES	589,492 111.6			\$4,285,900			

SUMMARY ADDENDUM  
TO  
PRELIMINARY ENGINEERING REPORT

DATED December 4, 1998

FOR

Grayson County Water District - Project 11  
(Name of Project)

APPLICANT CONTACT PERSON Alan H. Vilines, P.E.

APPLICANT PHONE NUMBER 502-842-0052

APPLICANT TAX IDENTIFICATION NUMBER (TIN) 61-1038814

***ITEMS IN BOLD ITALIC PRINT ARE APPLICABLE TO SEWER SYSTEMS.***

In order to avoid unnecessary delays in application processing, the applicant and its consulting engineer should prepare a summary of the preliminary report in accordance with this Guide.

Please complete the applicable sections of the Summary Addendum. ***Please note, if water and sewer revenue will both be taken as security for the loan, all user information and characteristics of both utility systems will be needed even though the project will benefit only one utility.***

Feasibility reviews and **grant determinations** may be processed more accurately and more rapidly if the Summary/Addendum is submitted simultaneously with the preliminary engineering report, or as soon thereafter as possible.

I. GENERAL

A. Proposed Project: Provide a brief description of the proposed project. In addition to this summary, the applicant/engineer should submit a project map of the service area.

The proposed project consists of construction of approximately 45 miles of 4-inch and 7.8 miles of 6-inch water mains and appurtenances. One small booster pumping station is included in the project and will be located on Lone Hill Road to provide adequate pressure to this area. Approximately 222 meters will be installed adjacent to the mains to serve an estimated 550 people. As shown on the enclosed map (Exhibit A), the extensions are located throughout the Water District's service area.

II. FACILITY CHARACTERISTICS OF EXISTING SEWER SYSTEM

A. Sewage Treatment:

1. Type \_\_\_\_\_

2. Method of Sludge Disposal \_\_\_\_\_  
\_\_\_\_\_

3. Cost per 1,000 gallons if sewage treatment is contracted:

\$ \_\_\_\_\_

4. Date Constructed \_\_\_\_\_

B. Treatment Capacity of Sewage Treatment Plant \_\_\_\_\_

C. Type of Sewage Collector System (Describe) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

D. Number and Capacity of Sewage Lift Stations \_\_\_\_\_  
\_\_\_\_\_

E. Sewage Collection System:

Lineal Feet of Collector Lines, by size 6" \_\_\_\_\_ 8" \_\_\_\_\_  
10" \_\_\_\_\_ 12" \_\_\_\_\_, Larger \_\_\_\_\_  
Date(s) Constructed \_\_\_\_\_

F. Conditions of Existing System: Briefly describe the conditions and suitability for continued use of facility now owned by the applicant. Include any major renovation that will be needed within five to ten years.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

III. FACILITY CHARACTERISTICS OF EXISTING WATER SYSTEM

A. Water Source: Describe adequacy of source (quality and quantity). Include an explanation of raw water source, raw water intake structure, treatment plant capacity, and current level of production (WTP). Also describe the adequacy of Water Purchase Contract if applicable.

All water is purchased from the City of Leitchfield; raw water from Rough River Reservoir WTP. The WTP capacity is 2.6 mgd - peak production is approximately 1.6 mgd. The current water purchase contract extends for a term of 40 years from 1994 and provides for the purchase of 25,000,000 gallons/month and can be upgraded to 41,000,000 gallons/month. Current purchases are 18,884,000 gallons/month.

If the applicant purchases water:

Seller(s):

1. City of Leitchfield \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Price/1,000 gallons:

1. \$1.274 \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Present Estimated Market Value of Existing System: \$ 10,729,298



#### IV. EXISTING LONG-TERM INDEBTEDNESS

##### A. List of Bonds and Notes:

<u>Date of Issue</u>	<u>Bond/Note Holder</u>	<u>1998 Principal Balance</u>	<u>Payment Date</u>	<u>Bond Type Water/Sewer*</u>	<u>Amount on Deposit In Reserve Account</u>
<u>1976 Issue</u>	<u>RECD</u>	<u>\$ 330,000.00</u>	<u>12-31-98</u>	<u>5 % %</u>	<u>\$ 3,025.11</u>
<u>1977 Issue</u>	<u>RECD</u>	<u>\$ 210,000.00</u>	<u>12-31-98</u>	<u>5 % %</u>	<u>\$ 1,627.40</u>
<u>1981 Issue</u>	<u>RECD</u>	<u>\$ 115,000.00</u>	<u>12-31-98</u>	<u>5 % %</u>	<u>\$ 861.61</u>
<u>1985 Issue</u>	<u>RECD</u>	<u>\$ 233,000.00</u>	<u>12-31-98</u>	<u>5 % %</u>	<u>\$ 1,530.71</u>
<u>1988 Issue</u>	<u>RECD</u>	<u>\$ 1,223,000.00</u>	<u>12-31-98</u>	<u>5 % %</u>	<u>\$ 7,822.84</u>
<u>1991 Issue</u>	<u>RECD</u>	<u>\$ 1,367,000.00</u>	<u>12-31-98</u>	<u>5 % %</u>	<u>\$ 8,389.40</u>
<u>1995 Issue</u>	<u>RECD</u>	<u>\$ 1,955,000.00</u>	<u>12-31-98</u>	<u>4.5 % %</u>	<u>\$ 10,900.84</u>
<u>1997 Issue</u>	<u>RECD</u>	<u>\$ 1,500,000.00</u>	<u>12-31-98</u>	<u>4.5 % %</u>	<u>\$ 7,910.90</u>
<u>TOTALS</u>		<u>\$ 6,933,000.00</u>			<u>\$ 42,068.81</u>

\*If a combined issue, show attributable portion to each system.

##### B. Principal and Interest Payments: (Begin with Next Fiscal Year Payment)

<u>Date Of Issue</u>	<u>Bond/Note Holder</u>	<u>Payment Year 1999</u>		<u>Payment Year 2000</u>		<u>Payment Year 2001</u>	
		<u>Principal Payment</u>	<u>Interest Payment</u>	<u>Principal Payment</u>	<u>Interest Payment</u>	<u>Principal Payment</u>	<u>Interest Payment</u>
<u>1976 Issue</u>	<u>RECD</u>	<u>\$ 14,000.00</u>	<u>\$ 15,800.00</u>	<u>\$ 15,000.00</u>	<u>\$ 15,100.00</u>	<u>\$ 16,000.00</u>	<u>\$ 14,350.00</u>
<u>1977 Issue</u>	<u>RECD</u>	<u>\$ 6,000.00</u>	<u>\$ 10,200.00</u>	<u>\$ 6,000.00</u>	<u>\$ 9,900.00</u>	<u>\$ 7,000.00</u>	<u>\$ 9,600.00</u>
<u>1981 Issue</u>	<u>RECD</u>	<u>\$ 3,000.00</u>	<u>\$ 5,600.00</u>	<u>\$ 3,000.00</u>	<u>\$ 5,450.00</u>	<u>\$ 3,000.00</u>	<u>\$ 5,300.00</u>
<u>1985 Issue</u>	<u>RECD</u>	<u>\$ 4,000.00</u>	<u>\$ 11,450.00</u>	<u>\$ 5,000.00</u>	<u>\$ 11,250.00</u>	<u>\$ 5,000.00</u>	<u>\$ 11,000.00</u>
<u>1988 Issue</u>	<u>RECD</u>	<u>\$ 19,000.00</u>	<u>\$ 60,200.00</u>	<u>\$ 20,000.00</u>	<u>\$ 59,250.00</u>	<u>\$ 21,000.00</u>	<u>\$ 58,250.00</u>
<u>1991 Issue</u>	<u>RECD</u>	<u>\$ 18,000.00</u>	<u>\$ 67,500.00</u>	<u>\$ 19,000.00</u>	<u>\$ 66,600.00</u>	<u>\$ 20,000.00</u>	<u>\$ 65,650.00</u>
<u>1995 Issue</u>	<u>RECD</u>	<u>\$ 24,000.00</u>	<u>\$ 86,940.00</u>	<u>\$ 25,000.00</u>	<u>\$ 85,860.00</u>	<u>\$ 26,000.00</u>	<u>\$ 84,735.00</u>
<u>1997 Issue</u>	<u>RECD</u>	<u>\$ 16,000.00</u>	<u>\$ 66,780.00</u>	<u>\$ 17,000.00</u>	<u>\$ 66,060.00</u>	<u>\$ 18,000.00</u>	<u>\$ 65,295.00</u>
<u>TOTALS</u>		<u>\$ 104,000.00</u>	<u>\$ 324,470.00</u>	<u>\$ 110,000.00</u>	<u>\$ 319,470.00</u>	<u>\$ 116,000.00</u>	<u>\$ 314,180.00</u>

V. EXISTING SHORT TERM INDEBTEDNESS

A. List of All Short Term Debts: (Do Not Show Any Debt Listed in Paragraph IV Above) NONE

<u>Lender or Lessor</u>	<u>Date of Issue (Month &amp; Year)</u>	<u>Principal Balance</u>	<u>Purpose (Water and/ or Sewer)</u>	<u>Payment Date</u>	<u>Principal &amp; Interest Payment (P&amp;I)</u>	<u>Date to Be Paid In Full</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

VI. LAND AND RIGHTS - EXISTING SYSTEM(S)

Number of Treatment Plant Sites: Water \_\_\_\_\_ Sewer \_\_\_\_\_  
 Number of Storage Tank Sites Water 5 Sewer \_\_\_\_\_  
 Number of Pump Stations: Water 5 Sewer \_\_\_\_\_  
 Total Acreage: Water ±2 Acres Sewer \_\_\_\_\_ Acres  
 Purchase Price: Water \$ 15,595 Sewer \$ \_\_\_\_\_

VII. NUMBER OF EXISTING USERS

	<u>Water</u>	<u>Sewer</u>
Residential (In Town) *	_____	_____
Residential (Out of Town) *	<u>3,850</u>	_____
Non-Residential (In Town)	_____	_____
Non-Residential (Out of Town)	<u>235</u>	_____
Total	<u>4,085</u>	_____
Number to Total Potential Users Living in the Service Area	<u>4,700</u>	_____

\*Note: Residential Users: Classify by type of user regardless of quantity of water used. This classification should include those meters serving individual rural residence.

VIII. CURRENT WATER AND SEWER CONNECTION FEES FOR EACH SIZE WATER METER CONNECTION

<u>Meter Size</u>	<u>Water Connection Fee</u>	<u>Sewer Connection Fee</u>
<u>5/8" x 3/4"</u>	<u>\$ 450</u>	<u>\$</u>
<u>1 - Inch</u>	<u>\$ 550</u>	<u>\$</u>

See Sheet 7A for additional connection fees.

IX. SEWER RATES - EXISTING SYSTEM

Percentage of Water Bill \_\_\_\_\_ % Minimum Charge \$ \_\_\_\_\_

Other: (If Charge Not Based on Water Bill) \_\_\_\_\_

Date This Rate Went Into Effect \_\_\_\_\_

X. WATER RATES - EXISTING SYSTEM

Existing Rate Schedule:

First	<u>1,500</u>	Gallons @ \$	<u>12.75*</u>	Minimum.
Next	<u>8,500</u>	Gallons @ \$	<u>5.64</u>	per 1,000 Gallons.
Next	<u>40,000</u>	Gallons @ \$	<u>4.65</u>	per 1,000 Gallons.
Next	<u>100,000</u>	Gallons @ \$	<u>3.88</u>	per 1,000 Gallons.
Next	<u>N/A</u>	Gallons @ \$	<u>N/A</u>	per 1,000 Gallons.
Next	<u>N/A</u>	Gallons @ \$	<u>N/A</u>	per 1,000 Gallons.
All Over	<u>150,000</u>	Gallons @ \$	<u>3.11</u>	per 1,000 Gallons.

Date This Rate Went Into Effect July 19, 1997

\*\$12.75 Minimum applicable only to 5/8" x 3/4" meters.  
If More Than One Rate Schedule, Please Include All Schedules.

See Sheet 7A for full rate schedule.

**GRAYSON COUNTY WATER DISTRICT  
RATE SCHEDULE**

First	1,500 Gallons	\$12.75 Minimum Bill*
Next	8,500 Gallons	5.64 per 1,000 Gallons
Next	40,000 Gallons	4.65 per 1,000 Gallons
Next	100,000 Gallons	3.88 per 1,000 Gallons
Over	150,000 Gallons	3.11 per 1,000 Gallons

\*\$12.75 Minimum applicable only to 5/8" x 3/4" meters. The following minimums will apply to all other meter sizes.

<u>METER SIZE</u>		<u>GALLONS</u>		<u>MINIMUM BILL</u>
3/4" Meter	First	3,000 Gallons	\$	21.66 Minimum Bill
1" Meter	First	5,000 Gallons		33.41 Minimum Bill
1-1/2" Meter	First	10,000 Gallons		67.18 Minimum Bill
2" Meter	First	16,000 Gallons		96.46 Minimum Bill
3" Meter	First	30,000 Gallons		186.69 Minimum Bill
4" Meter	First	50,000 Gallons		285.20 Minimum Bill
6" Meter	First	100,000 Gallons		529.41 Minimum Bill
8" Meter	First	160,000 Gallons		800.95 Minimum Bill
10" Meter	First	550,000 Gallons		2,040.79 Minimum Bill

The rates to be charged after the minimum rate and usage are the same regardless of meter size.

**INSTALLATION FEES**

5/8-inch meter (residential) .....	\$450
1-inch meter .....	550
1-1/2-inch meter .....	1,150
2-inch meter .....	*1,300
3-inch meter .....	*4,000
4-inch meter .....	*4,600
6-inch or larger .....	Actual Cost of Installation

\*plus the cost of crossing a roadway

In addition to the above installation fees for the various size meters, the customer shall pay the cost of installing all service line bores or open cuts which extend beyond 5 feet of the water main on 2-inch meters or larger.

XI. ANALYSIS OF ACTUAL SEWER USAGE - EXISTING SYSTEM - 12 MONTH PERIOD

For Period \_\_\_\_\_ to \_\_\_\_\_

<u>All Meter Sizes</u>	<u>Monthly Sewer Usage</u>	<u>Average</u>	<u>Residential</u>		<u>Non-Residential</u>	
			<u>No. of Users</u>	<u>Usage (1000)</u>	<u>No. of Users</u>	<u>Usage (1000)</u>
	0 - 2,000 Gallons	1,000	_____	_____	_____	_____
	2,000 - 3,000 Gallons	2,500	_____	_____	_____	_____
	3,000 - 4,000 Gallons	3,500	_____	_____	_____	_____
	4,000 - 5,000 Gallons	4,500	_____	_____	_____	_____
	5,000 - 6,000 Gallons	5,500	_____	_____	_____	_____
	6,000 - 7,000 Gallons	6,500	_____	_____	_____	_____
	7,000 - 8,000 Gallons	7,500	_____	_____	_____	_____
	8,000 - 9,000 Gallons	8,500	_____	_____	_____	_____
	9,000 - 10,000 Gallons	9,500	_____	_____	_____	_____
	10,000 - 11,000 Gallons	10,500	_____	_____	_____	_____
	11,000 - 12,000 Gallons	11,500	_____	_____	_____	_____
	12,000 - 13,000 Gallons	12,500	_____	_____	_____	_____
	13,000 - 14,000 Gallons	13,500	_____	_____	_____	_____
	14,000 - 15,000 Gallons	14,500	_____	_____	_____	_____
	15,000 - 16,000 Gallons	15,500	_____	_____	_____	_____
	16,000 - 17,000 Gallons	16,500	_____	_____	_____	_____
	17,000 - 18,000 Gallons	17,500	_____	_____	_____	_____
	18,000 - 19,000 Gallons	18,500	_____	_____	_____	_____
	19,000 - 20,000 Gallons	19,500	_____	_____	_____	_____
	_____ - _____ Gallons	_____	_____	_____	_____	_____
	_____ - _____ Gallons	_____	_____	_____	_____	_____
	_____ - _____ Gallons	_____	_____	_____	_____	_____
		<b>Total</b>	( )	( )	( )	( )
		<b>Average Usage</b>		( )		( )

XII. ANALYSIS OF ACTUAL WATER USAGE - EXISTING SYSTEM 12 MONTH PERIOD

For Period September 1997 to September 1998

All Meter Sizes

MONTHLY WATER USAGE	Average	Residential		Non-Residential	
		No. of Users	Usage	No. of Users	Usage
0 - 2,000 Gal.	630	1,377	10,410,120	113	854,280
2,000 - 3,000 Gal.	2,503	575	17,279,220	23	682,068
3,000 - 4,000 Gal.	3,488	528	22,099,968	12	504,336
4,000 - 5,000 Gal.	4,486	435	23,416,920	7	376,824
5,000 - 6,000 Gal.	5,474	311	20,438,700	12	776,700
6,000 - 7,000 Gal.	6,468	207	16,064,028	5	390,828
7,000 - 8,000 Gal.	7,472	132	11,832,300	6	540,684
8,000 - 9,000 Gal.	8,455	81	8,217,288	4	406,620
9,000 - 10,000 Gal.	9,454	48	5,445,504	2	226,656
10,000 - 11,000 Gal.	10,460	37	4,644,240	2	250,980
11,000 - 12,000 Gal.	11,477	24	3,303,360	3	415,104
12,000 - 13,000 Gal.	12,899	31	4,798,896	4	618,636
13,000 - 14,000 Gal.	0	0	0	0	0
14,000 - 15,000 Gal.	14,845	16	2,851,284	3	533,436
15,000 - 16,000 Gal.	15,850	0	0	1	190,200
16,000 - 17,000 Gal.	16,954	10	2,034,480	2	406,896
17,000 - 18,000 Gal.	0	0	0	0	0
18,000 - 19,000 Gal.	18,843	6	1,356,696	1	226,116
19,000 - 20,000 Gal.	19,224	0	0	1	230,688
20,000 - 25,000 Gal.	22,431	9	2,410,956	5	1,357,512
25,000 - 30,000 Gal.	27,718	6	1,987,344	4	1,338,756
30,000 - 40,000 Gal.	34,463	6	2,495,952	7	2,880,276
40,000 - 50,000 Gal.	44,459	4	2,116,608	5	2,684,928
50,000 - 75,000 Gal.	60,551	2	1,480,224	5	3,606,024
75,000 - 100,000 Gal.	86,957	4	4,151,676	2	2,109,228
100,000 - 150,000 Gal.	119,338	1	1,381,248	3	4,346,964
150,000 - 200,000 Gal.	168,800	0	0	1	2,025,600
200,000 - 300,000 Gal.	248,727	0	0	2	5,969,448
300,000 - 400,000 Gal.	0	0	0	0	0
400,000 - 500,000 Gal.	0	0	0	0	0
500,000 & ABOVE Gal.	0	0	0	0	0
SUBTOTALS		3,850	170,217,012	235	33,949,788
Average Monthly Usage			3,684		12,039
Total Water Purchased or Produced			188,923,900		37,680,900
Total Water Sold			170,217,012		33,949,788

**XIII. FACILITY CHARACTERISTICS OF PROPOSED SEWER SYSTEM**

**A. Sewage Treatment:**

1. Type \_\_\_\_\_

2. Method of Sludge Disposal \_\_\_\_\_

3. Cost per 1,000 gallons if sewage treatment is contracted:  
\$ \_\_\_\_\_

**B. Treatment Capacity of Sewage Treatment Plant** \_\_\_\_\_

**C. Type of Sewage Collector System (Describe)** \_\_\_\_\_

**D. Number and Capacity of Sewage Lift Stations** \_\_\_\_\_

**E. Sewage Collection System:**

Lineal Feet of Collector Lines, by size 6" \_\_\_\_\_ 8" \_\_\_\_\_

10" \_\_\_\_\_ 12" \_\_\_\_\_, Larger \_\_\_\_\_

**XIV. LAND AND RIGHTS - PROPOSED SEWER SYSTEM**

Number of Treatment Plant Sites \_\_\_\_\_

Number of Pump Sites \_\_\_\_\_

Number of Other Sites \_\_\_\_\_

Total Acreage \_\_\_\_\_ Acres

Purchase Price \$ \_\_\_\_\_

XV. FACILITY CHARACTERISTICS OF PROPOSED WATER SYSTEM

A. Water Source: Describe adequacy of source (quality and quantity). Include an explanation of raw water source, raw water intake structure, treatment plant capacity, and current level of production (WTP). Also describe the adequacy of Water Purchase Contract if applicable.

All water will be purchased from the City of Leitchfield. Grayson County Water District's current water purchase contract provides for the purchase of 25,000,000 gallons/month and can be upgraded to 41,000,000 gallons/month. The proposed project will require an additional 603,350 gallons/month bringing total purchases to 19,487,350 gallons/month.

B. Water Storage:

Type: Ground Storage Tank \_\_\_\_\_ Elevated Tank \_\_\_\_\_  
Standpipe \_\_\_\_\_ Other \_\_\_\_\_

Number of Storage Structures \_\_\_\_\_ None \_\_\_\_\_

Total Storage Volume Capacity \_\_\_\_\_

C. Water Distribution System:

Pipe Material \_\_\_\_\_ PVC \_\_\_\_\_

Lineal Feet of Pipe: 3" Diameter \_\_\_\_\_ 4" 238,040 \_\_\_\_\_

6" 40,950 \_\_\_\_\_ 8" \_\_\_\_\_

10" \_\_\_\_\_ 12" \_\_\_\_\_

Number and Capacity of Pump Station(s) One at 75 gpm \_\_\_\_\_

XVI. LAND AND RIGHTS - PROPOSED WATER SYSTEM

Number of Treatment Plant Sites \_\_\_\_\_ None \_\_\_\_\_

Number of Pump Sites \_\_\_\_\_ One \_\_\_\_\_

Number of Other Sites \_\_\_\_\_

Total Acreage \_\_\_\_\_ .3 \_\_\_\_\_ Acres

Purchase Price \$ \_\_\_\_\_ 1,000 \_\_\_\_\_

XVII. NUMBER OF NEW SEWER USERS

*Residential (In Town) \**

\_\_\_\_\_

*Residential (Out of Town) \**

\_\_\_\_\_

*Non-Residential (In Town)*

\_\_\_\_\_

*Non-Residential (Out of Town)*

\_\_\_\_\_

*Total*

\_\_\_\_\_

*Number to Total Potential Users Living in the Service Area*

\_\_\_\_\_

*\*Note: Residential Users: Classify by type of user regardless of quantity of water used. This classification should include those meters serving individual rural residences.*

XVIII. PROPOSED SEWER CONNECTION FEES FOR EACH SIZE WATER METER CONNECTION

<u>Meter Size</u>	<u>Connection Fee</u>
<u>5/8" x 3/4"</u>	\$ _____
<u>1 - Inch</u>	\$ _____
<u>1-1/2 Inch</u>	\$ _____
<u>2 - Inch</u>	\$ _____
<u>3 - Inch</u>	\$ _____
<u>4 - Inch</u>	\$ _____
<u>5 - Inch</u>	\$ _____
<u>6 - Inch</u>	\$ _____

XIX. NUMBER OF NEW WATER USERS

Residential (In Town) *	
Residential (Out of Town) *	222
Non-Residential (In Town)	
Non-Residential (Out of Town)	
Total	222
Number to Total Potential Users Living in the Service Area	Approx. 600

\*Note: Residential Users: Classify by type of user regardless of quantity of water used. This classification should include those meters serving individual rural residences.

XX. PROPOSED WATER CONNECTION FEES FOR EACH SIZE WATER METER CONNECTION:

<u>Meter Size</u>	<u>Connection Fee</u>
<u>5/8" x 3/4"</u>	\$ <u>450</u>
<u>1 - Inch</u>	\$ <u>550</u>
<u>1-1/2 Inch</u>	\$ <u>1,150</u>
<u>2 - Inch</u>	\$ <u>1,300**</u>
<u>3 - Inch</u>	\$ <u>4,000**</u>
<u>4 - Inch</u>	\$ <u>4,600**</u>
<u>5 - Inch</u>	\$ <u>N/A</u>
<u>6 - Inch</u>	\$ <u>Actual Cost</u>
<u>8 - Inch</u>	\$ <u>Actual Cost</u>
<u>10 - Inch</u>	\$ <u>Actual Cost</u>

\*\*plus the cost of crossing a roadway

In addition to the above installation fees for the various size meters, the customer shall pay the cost of installing all service line bores or open cuts which extend beyond 5 feet of the water main on 2-inch meters or larger.

During the initial sign-up period for Project 11, the connect fee for 5/8" x 3/4" meters will be \$225 and all other meters up to 4-inch will be 1/2 of amount indicated above.

**XXI. SEWER RATES PROPOSED**

**A. Proposed Rate Schedule without RUS Grant:**

Percentage of Water Bill \_\_\_\_\_ % Minimum Charge \$ \_\_\_\_\_  
 Other: (If Charge Not Based on Water Bill) \_\_\_\_\_

**Proposed Rate Schedule: (Without RUS Grant)**

First \_\_\_\_\_ Gallons @ \$ \_\_\_\_\_ Minimum.  
 Next \_\_\_\_\_ Gallons @ \$ \_\_\_\_\_ per 1,000 Gallons.  
 Next \_\_\_\_\_ Gallons @ \$ \_\_\_\_\_ per 1,000 Gallons.  
 Next \_\_\_\_\_ Gallons @ \$ \_\_\_\_\_ per 1,000 Gallons.  
 Next \_\_\_\_\_ Gallons @ \$ \_\_\_\_\_ per 1,000 Gallons.  
 Next \_\_\_\_\_ Gallons @ \$ \_\_\_\_\_ per 1,000 Gallons.  
 All Over \_\_\_\_\_ Gallons @ \$ \_\_\_\_\_ per 1,000 Gallons.

*The above proposed rate, without RUS grant, must be completed for each grant. If the applicant/engineer desires, there is no objection to recommending a proposed rate with an estimated RUS grant in the Table below. However, the preparer should remember that the Table (A) above must be completed prior to Table (B).*

**B. Recommended Rate Schedule with RUS Grant:**

Percentage of Water Bill \_\_\_\_\_ % Minimum Charge \$ \_\_\_\_\_  
 Other: (If Charge Not Based on Water Bill) \_\_\_\_\_

**Recommended Rate Schedule: (With RUS Grant)**

First \_\_\_\_\_ Gallons @ \$ \_\_\_\_\_ Minimum.  
 Next \_\_\_\_\_ Gallons @ \$ \_\_\_\_\_ per 1,000 Gallons.  
 Next \_\_\_\_\_ Gallons @ \$ \_\_\_\_\_ per 1,000 Gallons.  
 Next \_\_\_\_\_ Gallons @ \$ \_\_\_\_\_ per 1,000 Gallons.  
 Next \_\_\_\_\_ Gallons @ \$ \_\_\_\_\_ per 1,000 Gallons.  
 Next \_\_\_\_\_ Gallons @ \$ \_\_\_\_\_ per 1,000 Gallons.  
 All Over \_\_\_\_\_ Gallons @ \$ \_\_\_\_\_ per 1,000 Gallons.

*If more than one rate, use additional sheets.*

XXII. WATER RATES PROPOSED

A. Proposed Rate Schedule without RUS Grant:

First	<u>1,500</u>	Gallons @ \$	<u>13.04*</u>	Minimum.
Next	<u>8,500</u>	Gallons @ \$	<u>5.77</u>	per 1,000 Gallons.
Next	<u>40,000</u>	Gallons @ \$	<u>4.76</u>	per 1,000 Gallons.
Next	<u>100,000</u>	Gallons @ \$	<u>3.97</u>	per 1,000 Gallons.
Next	<u>N/A</u>	Gallons @ \$	<u></u>	per 1,000 Gallons.
Next	<u>N/A</u>	Gallons @ \$	<u></u>	per 1,000 Gallons.
All Over	<u>150,000</u>	Gallons @ \$	<u>3.18</u>	per 1,000 Gallons.

\*\$13.04 Minimum applicable only to 5/8" x 3/4" meters.  
 The above proposed rate, without RUS grant, must be completed for each grant. If the applicant/engineer desires, there is no objection to recommending a proposed rate with an estimated RUS grant in the Table below. However, the preparer should remember that the Table (A) above must be completed prior to Table (B).

B. Recommended Rate Schedule with RUS Grant:

First	<u>1,500</u>	Gallons @ \$	<u>12.75*</u>	Minimum.
Next	<u>8,500</u>	Gallons @ \$	<u>5.64</u>	per 1,000 Gallons.
Next	<u>40,000</u>	Gallons @ \$	<u>4.76</u>	per 1,000 Gallons.
Next	<u>100,000</u>	Gallons @ \$	<u>3.88</u>	per 1,000 Gallons.
Next	<u>N/A</u>	Gallons @ \$	<u></u>	per 1,000 Gallons.
Next	<u>N/A</u>	Gallons @ \$	<u></u>	per 1,000 Gallons.
All Over	<u>150,000</u>	Gallons @ \$	<u>3.11</u>	per 1,000 Gallons.

\*\$12.75 Minimum applicable only to 5/8" x 3/4" meters.  
 If more than one rate, use additional sheets.

See Sheet 15A for full rate schedules with and without a RUS grant.

## RATE SCHEDULE WITHOUT RUS GRANT

First	1,500 Gallons	\$13.04 Minimum Bill*
Next	8,500 Gallons	5.77 per 1,000 Gallons
Next	40,000 Gallons	4.76 per 1,000 Gallons
Next	100,000 Gallons	3.97 per 1,000 Gallons
Over	150,000 Gallons	3.18 per 1,000 Gallons

\*\$13.04 Minimum applicable only to 5/8" x 3/4" meters. The following minimums will apply to all other meter sizes.

<u>METER SIZE</u>		<u>GALLONS</u>	<u>MINIMUM BILL</u>
3/4" Meter	First	3,000 Gallons	22.16 Minimum Bill
1" Meter	First	5,000 Gallons	34.18 Minimum Bill
1-1/2" Meter	First	10,000 Gallons	68.73 Minimum Bill
2" Meter	First	16,000 Gallons	98.68 Minimum Bill
3" Meter	First	30,000 Gallons	190.98 Minimum Bill
4" Meter	First	50,000 Gallons	291.76 Minimum Bill
6" Meter	First	100,000 Gallons	541.59 Minimum Bill
8" Meter	First	160,000 Gallons	819.37 Minimum Bill
10" Meter	First	550,000 Gallons	2,087.73 Minimum Bill

The rates to be charged after the minimum rate and usage are the same regardless of meter size.

## RATE SCHEDULE WITH RUS GRANT

First	1,500 Gallons	\$12.75 Minimum Bill*
Next	8,500 Gallons	5.64 per 1,000 Gallons
Next	40,000 Gallons	4.65 per 1,000 Gallons
Next	100,000 Gallons	3.88 per 1,000 Gallons
Over	150,000 Gallons	3.11 per 1,000 Gallons

\*\$12.75 Minimum applicable only to 5/8" x 3/4" meters. The following minimums will apply to all other meter sizes.

<u>METER SIZE</u>		<u>GALLONS</u>	<u>MINIMUM BILL</u>
3/4" Meter	First	3,000 Gallons	21.66 Minimum Bill
1" Meter	First	5,000 Gallons	33.41 Minimum Bill
1-1/2" Meter	First	10,000 Gallons	67.18 Minimum Bill
2" Meter	First	16,000 Gallons	96.46 Minimum Bill
3" Meter	First	30,000 Gallons	186.69 Minimum Bill
4" Meter	First	50,000 Gallons	285.20 Minimum Bill
6" Meter	First	100,000 Gallons	529.41 Minimum Bill
8" Meter	First	160,000 Gallons	800.95 Minimum Bill
10" Meter	First	550,000 Gallons	2,040.79 Minimum Bill

The rates to be charged after the minimum rate and usage are the same regardless of meter size.

**XXIII. FORECAST OF SEWER USAGE - INCOME - EXISTING SYSTEM - EXISTING USERS**

Meter Size*	Monthly Sewer Usage	Average Rate	Residential			Non-Residential		
			No. of Users** (1000)	Usage (1000)	Income	No. of Users (1000)	Usage (1000)	Income
	0 - 2,000 Gallons	1,000						
	2,000 - 3,000 Gallons	2,500						
	3,000 - 4,000 Gallons	3,500						
	4,000 - 5,000 Gallons	4,500						
	5,000 - 6,000 Gallons	5,500						
	6,000 - 7,000 Gallons	6,500						
	7,000 - 8,000 Gallons	7,500						
	8,000 - 9,000 Gallons	8,500						
	9,000 - 10,000 Gallons	9,500						
5/8	10,000 - 11,000 Gallons	10,500						
x	11,000 - 12,000 Gallons	11,500						
3/4	12,000 - 13,000 Gallons	12,500						
Inch	13,000 - 14,000 Gallons	13,500						
	14,000 - 15,000 Gallons	14,500						
	15,000 - 16,000 Gallons	15,500						
	16,000 - 17,000 Gallons	16,500						
	17,000 - 18,000 Gallons	17,500						
	18,000 - 19,000 Gallons	18,500						
	19,000 - 20,000 Gallons	19,500						
	- Gallons							
	- Gallons							
	- Gallons							
	Sub-Total		( )	( )	( )	( )	( )	( )
	Average Monthly Rate ( )							
	Average Monthly Usage		( )			( )		

\* Breakdown of meter size usage is not required unless different sewer rates are charged based on size of water meter.

\*\* Number of users should reflect the actual number of "meter settings".





**XXIV. FORECAST OF SEWER USAGE - INCOME - NEW USERS - EXTENSION ONLY**

Meter Size*	Monthly Sewer Usage	Average Rate	Residential			Non-Residential		
			No. of Users** (1000)	Usage (1000)	Income	No. of Users (1000)	Usage (1000)	Income
	0 - 2,000 Gallons	1,000						
	2,000 - 3,000 Gallons	2,500						
	3,000 - 4,000 Gallons	3,500						
	4,000 - 5,000 Gallons	4,500						
	5,000 - 6,000 Gallons	5,500						
	6,000 - 7,000 Gallons	6,500						
	7,000 - 8,000 Gallons	7,500						
	8,000 - 9,000 Gallons	8,500						
	9,000 - 10,000 Gallons	9,500						
5/8	10,000 - 11,000 Gallons	10,500						
x	11,000 - 12,000 Gallons	11,500						
3/4	12,000 - 13,000 Gallons	12,500						
Inch	13,000 - 14,000 Gallons	13,500						
	14,000 - 15,000 Gallons	14,500						
	15,000 - 16,000 Gallons	15,500						
	16,000 - 17,000 Gallons	16,500						
	17,000 - 18,000 Gallons	17,500						
	18,000 - 19,000 Gallons	18,500						
	19,000 - 20,000 Gallons	19,500						
	- Gallons							
	- Gallons							
	- Gallons							
	Sub-Total		( )	( )	( )	( )	( )	( )
	Average Monthly Rate ( )							
	Average Monthly Usage		( )			( )		

\* Breakdown of meter size usage is not required unless different sewer rates are charged based on size of water meter.

\*\* Number of users should reflect the actual number of "meter settings".





XXV. FORECAST OF WATER USAGE - INCOME - EXISTING SYSTEM - EXISTING USERS

5/8" METERS:

USAGE/MON	AVG	AVG RATE	RESIDENTIAL			NON-RESIDENTIAL			
			USERS	USAGE	INCOME	USERS	USAGE	INCOME	
0 TO	2,000	630	20.24	1,377	10,410,120	\$210,681	113	854,280	\$17,289
2 TO	3,000	2,505	7.35	573	17,224,380	126,656	16	480,960	3,537
3 TO	4,000	3,488	6.87	528	22,099,968	151,811	11	460,416	3,163
4 TO	5,000	4,486	6.60	435	23,416,920	154,460	7	376,824	2,486
5 TO	6,000	5,476	6.42	310	20,370,720	130,832	7	459,984	2,954
6 TO	7,000	6,467	6.30	207	16,064,028	101,248	4	310,416	1,956
7 TO	8,000	7,468	6.21	131	11,739,696	72,957	5	448,080	2,785
8 TO	9,000	8,454	6.15	81	8,217,288	50,515	3	304,344	1,871
9 TO	10,000	9,454	6.09	48	5,445,504	33,183	1	113,448	691
10 TO	11,000	10,460	6.01	37	4,644,240	27,897	1	125,520	754
11 TO	12,000	11,470	5.89	24	3,303,360	19,449	2	275,280	1,621
12 TO	14,000	12,897	5.75	30	4,642,920	26,698	2	309,528	1,780
14 TO	16,000	14,858	5.61	15	2,674,440	14,990	2	356,592	1,999
16 TO	18,000	16,954	5.49	10	2,034,480	11,164	2	406,896	2,233
18 TO	20,000	18,843	5.40	6	1,356,696	7,330	1	226,116	1,222
20 TO	25,000	22,250	5.29	8	2,136,000	11,294	2	534,000	2,824
25 TO	30,000	27,433	5.17	5	1,645,980	8,505	2	658,392	3,402
30 TO	40,000	34,666	5.06	6	2,495,952	12,628	3	1,247,976	6,314
40 TO	50,000	43,962	4.97	3	1,582,632	7,870	2	1,055,088	5,247
50 TO	75,000	61,676	4.73	2	1,480,224	7,008	2	1,480,224	7,008
75 TO	100,000	85,102	4.50	3	3,063,672	13,784	1	1,021,224	4,595
100 TO	150,000	115,104	4.34	1	1,381,248	5,991	1	1,381,248	5,991
150 TO	200,000	0	0.00	0	0	0	0	0	0
200 TO	300,000	0	0.00	0	0	0	0	0	0
300 TO	400,000	0	0.00	0	0	0	0	0	0
400 TO	500,000	0	0.00	0	0	0	0	0	0
500 TO	ABOVE	0	0.00	0	0	0	0	0	0
SUBTOTALS				3,840	167,430,468	\$1,206,951	190	12,886,836	\$81,722
AVG. RATE			\$7.15						
AVG. USAGE				3,633			5,517		

3/4" METERS:

USAGE/MON	AVG	AVG RATE	RESIDENTIAL			NON-RESIDENTIAL			
			USERS	USAGE	INCOME	USERS	USAGE	INCOME	
0 TO	3,000	0	0.00	0	0	0	0	0	
3 TO	4,000	3,660	6.94	0	0	0	1	43,920	305
4 TO	5,000	0	0.00	0	0	0	0	0	0
5 TO	6,000	0	0.00	0	0	0	0	0	0
6 TO	7,000	0	0.00	0	0	0	0	0	0
7 TO	8,000	0	0.00	0	0	0	0	0	0
8 TO	9,000	0	0.00	0	0	0	0	0	0
9 TO	10,000	0	0.00	0	0	0	0	0	0
10 TO	11,000	0	0.00	0	0	0	0	0	0
11 TO	12,000	0	0.00	0	0	0	0	0	0
12 TO	14,000	0	0.00	0	0	0	0	0	0
14 TO	16,000	0	0.00	0	0	0	0	0	0
16 TO	18,000	0	0.00	0	0	0	0	0	0
18 TO	20,000	0	0.00	0	0	0	0	0	0
20 TO	25,000	0	0.00	0	0	0	0	0	0
25 TO	30,000	0	0.00	0	0	0	0	0	0
30 TO	40,000	0	0.00	0	0	0	0	0	0
40 TO	50,000	0	0.00	0	0	0	0	0	0
50 TO	ABOVE	0	0.00	0	0	0	0	0	0
SUBTOTALS				0	0	\$0	1	43,920	\$305

1" METERS

				<u>RESIDENTIAL</u>			<u>NON-RESIDENTIAL</u>		
<u>USAGE/MON</u>	<u>AVG</u>	<u>AVG RATE</u>	<u>USERS</u>	<u>USAGE</u>	<u>INCOME</u>	<u>USERS</u>	<u>USAGE</u>	<u>INCOME</u>	
0 TO	5,000	2,285	14.62	2	54,840	\$802	5	137,100	\$2,005
5 TO	6,000	5,665	6.56	1	67,980	446	1	67,980	446
6 TO	7,000	6,701	6.42	0	0	0	1	80,412	516
7 TO	8,000	7,717	6.32	1	92,604	585	1	92,604	585
8 TO	9,000	8,523	6.25	0	0	0	1	102,276	639
9 TO	10,000	9,434	6.19	0	0	0	1	113,208	701
10 TO	11,000	10,455	6.10	0	0	0	1	125,460	765
11 TO	12,000	11,652	5.94	0	0	0	1	139,824	831
12 TO	14,000	12,998	5.81	1	155,976	907	1	155,976	907
14 TO	16,000	14,737	5.68	1	176,844	1,004	1	176,844	1,004
16 TO	18,000	0	0.00	0	0	0	0	0	0
18 TO	20,000	19,224	0.00	0	0	0	1	230,688	1,254
20 TO	25,000	22,913	5.31	1	274,956	1,460	2	549,912	2,920
25 TO	30,000	28,447	5.18	1	341,364	1,769	1	341,364	1,769
30 TO	40,000	34,315	5.09	0	0	0	2	823,560	4,192
40 TO	50,000	44,498	4.99	1	533,976	2,664	1	533,976	2,664
50 TO	75,000	61,326	4.75	0	0	0	1	735,912	3,499
75 TO	100,000	90,667	4.47	1	1,088,004	4,865	1	1,088,004	4,865
100 TO	150,000	125,823	4.31	0	0	0	1	1,509,876	6,502
150 TO	200,000	0	0.00	0	0	0	0	0	0
200 TO	300,000	233,568	3.75	0	0	0	1	2,802,816	10,498
300 TO	400,000	0	0.00	0	0	0	0	0	0
400 TO	500,000	0	0.00	0	0	0	0	0	0
500 TO	ABOVE	0	0.00	0	0	0	0	0	0
<b>SUBTOTALS</b>				10	2,786,544	\$14,502	25	9,807,792	\$46,562

1 1/2" METERS:

				<u>RESIDENTIAL</u>			<u>NON-RESIDENTIAL</u>		
<u>USAGE/MON</u>	<u>AVG</u>	<u>AVG RATE</u>	<u>USERS</u>	<u>USAGE</u>	<u>INCOME</u>	<u>USERS</u>	<u>USAGE</u>	<u>INCOME</u>	
0 TO	10,000	0	0.00	0	0	0	0	0	
10 TO	11,000	0	0.00	0	0	0	0	0	
11 TO	12,000	0	0.00	0	0	0	0	0	
12 TO	14,000	0	0.00	0	0	0	0	0	
14 TO	16,000	15,850	5.96	0	0	0	1	190,200	1,133
16 TO	18,000	0	0.00	0	0	0	0	0	
18 TO	20,000	0	0.00	0	0	0	0	0	
20 TO	25,000	0	0.00	0	0	0	0	0	
25 TO	30,000	0	0.00	0	0	0	0	0	
30 TO	40,000	0	0.00	0	0	0	0	0	
40 TO	50,000	0	0.00	0	0	0	0	0	
50 TO	75,000	0	0.00	0	0	0	0	0	
75 TO	100,000	0	0.00	0	0	0	0	0	
100 TO	150,000	0	0.00	0	0	0	0	0	
150 TO	200,000	168,800	4.14	0	0	0	1	2,025,600	8,396
200 TO	300,000	0	0.00	0	0	0	0	0	
300 TO	400,000	0	0.00	0	0	0	0	0	
400 TO	500,000	0	0.00	0	0	0	0	0	
500 TO	ABOVE	0	0.00	0	0	0	0	0	
<b>SUBTOTALS</b>				0	0	\$0	2	2,215,800	\$9,529

2" METERS:

USAGE/MON	AVG	AVG RATE	USERS	RESIDENTIAL			NON-RESIDENTIAL		
				USAGE	INCOME	USERS	USAGE	INCOME	
0 TO 16,000	5,182	18.61	0	0	\$0	4	248,736	\$4,630	
16 TO 18,000	0	0.00	0	0	0	0	0	0	
18 TO 20,000	0	0.00	0	0	0	0	0	0	
20 TO 25,000	22,800	5.62	0	0	0	1	273,600	1,537	
25 TO 30,000	28,250	5.43	0	0	0	1	339,000	1,841	
30 TO 40,000	36,283	5.26	0	0	0	1	435,396	2,289	
40 TO 50,000	45,661	5.13	0	0	0	2	1,095,864	5,625	
50 TO 75,000	57,912	4.93	0	0	0	2	1,389,888	6,846	
75 TO 100,000	0	0.00	0	0	0	0	0	0	
100 TO 150,000	121,320	4.24	0	0	0	1	1,455,840	6,178	
150 TO 200,000	0	0.00	0	0	0	0	0	0	
200 TO 300,000	263,886	3.63	0	0	0	1	3,166,632	11,499	
300 TO 400,000	0	0.00	0	0	0	0	0	0	
400 TO 500,000	0	0.00	0	0	0	0	0	0	
500 TO 750,000	0	0.00	0	0	0	0	0	0	
750 TO 1.0 M	0	0.00	0	0	0	0	0	0	
1.0 TO 1.5 M	0	0.00	0	0	0	0	0	0	
1.5 TO ABOVE	0	0.00	0	0	0	0	0	0	
SUBTOTALS			0	0	\$0	13	8,404,956	\$40,445	

3" METERS:

USAGE/MON	AVG	AVG RATE	USERS	RESIDENTIAL			NON-RESIDENTIAL		
				USAGE	INCOME	USERS	USAGE	INCOME	
0 TO 30,000	12,761	14.63	0	0	0	1	153,132	\$2,240	
30 TO 40,000	0	0.00	0	0	0	0	0	0	
40 TO 50,000	0	0.00	0	0	0	0	0	0	
50 TO 75,000	0	0.00	0	0	0	0	0	0	
75 TO 100,000	0	0.00	0	0	0	0	0	0	
100 TO 150,000	0	0.00	0	0	0	0	0	0	
150 TO 200,000	0	0.00	0	0	0	0	0	0	
200 TO 300,000	0	0.00	0	0	0	0	0	0	
300 TO 400,000	0	0.00	0	0	0	0	0	0	
400 TO 500,000	0	0.00	0	0	0	0	0	0	
500 TO 750,000	0	0.00	0	0	0	0	0	0	
750 TO 1.0 M	0	0.00	0	0	0	0	0	0	
1.0 TO 1.5 M	0	0.00	0	0	0	0	0	0	
1.5 TO ABOVE	0	0.00	0	0	0	0	0	0	
SUBTOTALS			0	0	0	1	153,132	\$2,240	

4" METERS:

USAGE/MON	AVG	AVG RATE	USERS	RESIDENTIAL			NON-RESIDENTIAL		
				USAGE	INCOME	USERS	USAGE	INCOME	
0 TO 50,000	31,112	9.17	0	0	0	1	373,344	\$3,422	
50 TO 75,000	0	0.00	0	0	0	0	0	0	
75 TO 100,000	0	0.00	0	0	0	0	0	0	
100 TO 150,000	0	0.00	0	0	0	0	0	0	
150 TO 200,000	0	0.00	0	0	0	0	0	0	
200 TO 300,000	0	0.00	0	0	0	0	0	0	
300 TO 400,000	0	0.00	0	0	0	0	0	0	
400 TO 500,000	0	0.00	0	0	0	0	0	0	
500 TO 750,000	0	0.00	0	0	0	0	0	0	
750 TO 1.0 M	0	0.00	0	0	0	0	0	0	
1.0 TO 1.5 M	0	0.00	0	0	0	0	0	0	
1.5 TO ABOVE	0	0.00	0	0	0	0	0	0	
SUBTOTALS			0	0	\$0	1	373,344	\$3,422	

6" METERS:

<u>USAGE/MON</u>	<u>AVG</u>	<u>AVG RATE</u>	<u>RESIDENTIAL</u>			<u>NON-RESIDENTIAL</u>		
			<u>USERS</u>	<u>USAGE</u>	<u>INCOME</u>	<u>USERS</u>	<u>USAGE</u>	<u>INCOME</u>
0 TO 100,000	2,667	198.51	0	0	0	2	64,008	\$12,706
100 TO 150,000	0	0.00	0	0	0	0	0	0
150 TO 200,000	0	0.00	0	0	0	0	0	0
200 TO 300,000	0	0.00	0	0	0	0	0	0
300 TO 400,000	0	0.00	0	0	0	0	0	0
400 TO 500,000	0	0.00	0	0	0	0	0	0
500 TO 750,000	0	0.00	0	0	0	0	0	0
750 TO 1.0 M	0	0.00	0	0	0	0	0	0
1.0 TO 1.5 M	0	0.00	0	0	0	0	0	0
1.5 TO 2.0 M	0	0.00	0	0	0	0	0	0
2.0 TO 2.5 M	0	0.00	0	0	0	0	0	0
2.5 TO 3.0 M	0	0.00	0	0	0	0	0	0
3.0 TO 4.0 M	0	0.00	0	0	0	0	0	0
4.0 TO 5.0 M	0	0.00	0	0	0	0	0	0
5.0 TO ABOVE	0	0.00	0	0	0	0	0	0
SUBTOTALS			0	0	\$0	2	64,008	\$12,706

TOTALS 3,850 170,217,012 1,221,453 235 33,949,788 196,931  
 TOTAL CUSTOMERS  
 AVG. CONSUMPTION PER MONTH 3,685 12,043

ANNUAL WATER SOLD 170,217,012 33,949,788  
 ANNUAL WATER PURCH. OR PROD. 188,923,900 37,680,900  
 ANNUAL REVENUE \$1,221,453 \$196,931

TOTAL ANNUAL WATER SOLD 204,166,800  
 TOTAL ANNUAL WATER PURCH. OR PROD. 226,604,800  
 TOTAL ANNUAL REVENUE \$1,418,384

MULTI-FAMILY AND APARTMENT USER ANALYSIS

All multi-family and apartment user information is included in the above analysis.

XXVI. FORECAST OF WATER USAGE - INCOME - NEW USERS - EXTENSION ONLY

5/8 X 3/4 INCH METER

MONTHLY WATER USAGE	Average	Average Rate	No. of Users	Residential		Non-Residential			
				Usage	Income	No. of Users	Usage	Income	
0 - 2,000 Gal.	630	20.24	128	967,680	\$19,584	0	0	\$0	
2,000 - 3,000 Gal.	2,505	7.35	33	991,980	7,294	0	0	0	
3,000 - 4,000 Gal.	3,488	6.87	15	627,840	4,313	0	0	0	
4,000 - 5,000 Gal.	4,486	6.60	11	592,152	3,906	0	0	0	
5,000 - 6,000 Gal.	5,476	6.42	10	657,120	4,220	0	0	0	
6,000 - 7,000 Gal.	6,467	6.30	6	465,624	2,935	0	0	0	
7,000 - 8,000 Gal.	7,468	6.21	5	448,080	2,785	0	0	0	
8,000 - 9,000 Gal.	8,454	6.15	5	507,240	3,118	0	0	0	
9,000 - 10,000 Gal.	9,454	6.09	3	340,344	2,074	0	0	0	
10,000 - 11,000 Gal.	10,460	6.01	2	251,040	1,508	0	0	0	
11,000 - 12,000 Gal.	11,470	5.89	1	137,640	810	0	0	0	
12,000 - 14,000 Gal.	12,897	5.75	1	154,764	890	0	0	0	
14,000 - 16,000 Gal.	14,858	5.61	1	178,296	999	0	0	0	
16,000 - 18,000 Gal.	16,954	5.49	1	203,448	1,116	0	0	0	
18,000 - 20,000 Gal.	0	0.00	0	0	0	0	0	0	
20,000 - 25,000 Gal.	0	0.00	0	0	0	0	0	0	
25,000 - 30,000 Gal.	0	0.00	0	0	0	0	0	0	
30,000 - 40,000 Gal.	0	0.00	0	0	0	0	0	0	
40,000 - 50,000 Gal.	0	0.00	0	0	0	0	0	0	
50,000 - 75,000 Gal.	0	0.00	0	0	0	0	0	0	
75,000 - 100,000 Gal.	0	0.00	0	0	0	0	0	0	
100,000 & ABOVE Gal.	0	0.00	0	0	0	0	0	0	
ANNUAL TOTALS			222	6,523,248	\$55,553	0	0	\$0	
AVG. RATE		\$8.52							
AVG. USAGE			2,449						



_____	-	_____ Gallons	_____	_____	_____	_____	_____
_____	-	_____ Gallons	_____	_____	_____	_____	_____
5-	-	_____ Gallons	_____	_____	_____	_____	_____
Inch	-	_____ Gallons	_____	_____	_____	_____	_____
_____	-	_____ Gallons	_____	_____	_____	_____	_____
_____	-	_____ Gallons	_____	_____	_____	_____	_____
		Sub-Total		( ) ( ) ( )	( ) ( ) ( )	( ) ( ) ( )	( ) ( ) ( )

_____	-	_____ Gallons	_____	_____	_____	_____	_____
_____	-	_____ Gallons	_____	_____	_____	_____	_____
6-	-	_____ Gallons	_____	_____	_____	_____	_____
Inch	-	_____ Gallons	_____	_____	_____	_____	_____
_____	-	_____ Gallons	_____	_____	_____	_____	_____
_____	-	_____ Gallons	_____	_____	_____	_____	_____
		Sub-Total		( ) ( ) ( )	( ) ( ) ( )	( ) ( ) ( )	( ) ( ) ( )

TOTALS ( ) ( ) ( ) ( ) ( ) ( )

**MULTI-FAMILY AND APARTMENT USER ANALYSIS**

If billed as a typical user, the information should be included in the residential information above.  
 If not billed as a typical residential user, please explain below.

<u>Name of Unit</u>	<u>Number of Units</u>	<u>Number of Meters</u>	<u>Revenue Calculations</u>
N/A	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

\* Breakdown of meter size usage is not required unless different sewer rates are charged based on size of water meter.

\*\* Number of users should reflect the actual number of "meter settings".

**XXVII. CURRENT OPERATING BUDGET - (SEWER SYSTEM)**

*(As of the last full operating year.)*

**A. Operating Income:**

*Sewer Revenue* \$ \_\_\_\_\_  
*Late Charge Fees* \_\_\_\_\_  
*Other (Describe)* \_\_\_\_\_  
*Less Allowances and Deductions* ( \_\_\_\_\_ )  
*Total Operating Income* \$ \_\_\_\_\_

**B. Operation and Maintenance Expenses:**

*(Based on Uniform System of Accounts prescribed by National Association of  
Regulatory Utility Commissioners)*

*Operation Expense* \$ \_\_\_\_\_  
*Maintenance Expense* \_\_\_\_\_  
*Customer Accounts Expense* \_\_\_\_\_  
*Administrative and General Expense* \_\_\_\_\_  
*Total Operating and Maintenance Expenses* \$ \_\_\_\_\_  
*Net Operating Income* \$ \_\_\_\_\_

**C. Non-Operating Income:**

*Interest on Deposits* \$ \_\_\_\_\_  
*Other (Identify)* \_\_\_\_\_  
*Total Non-Operating Income* \$ \_\_\_\_\_

**D. Net Income**

\$ \_\_\_\_\_

**E. Debt Repayment:**

*RUS Interest* \$ \_\_\_\_\_  
*RUS Principal* \_\_\_\_\_  
*Non-RUS Interest* \_\_\_\_\_  
*Non-RUS Principal* \_\_\_\_\_  
*Total Debt Repayment* \$ \_\_\_\_\_

**F. Balance Available for Coverage**

\$ \_\_\_\_\_

**XXVIII. PROPOSED OPERATING BUDGET - (SEWER SYSTEM) - EXISTING SYSTEM  
AND NEW USERS (1st Full Year of Operation) Year Ending \_\_\_\_\_**

**A. Operating Income:**

*Sewer Revenue* \$ \_\_\_\_\_  
*Late Charge Fees* \_\_\_\_\_  
*Other (Describe)* \_\_\_\_\_  
*Less Allowances and Deductions* ( \_\_\_\_\_ )  
*Total Operating Income* \$ \_\_\_\_\_

**B. Operation and Maintenance Expenses:**

*(Based on Uniform System of Accounts prescribed by National Association of  
Regulatory Utility Commissioners)*

*Operation Expense* \$ \_\_\_\_\_  
*Maintenance Expense* \_\_\_\_\_  
*Customer Accounts Expense* \_\_\_\_\_  
*Administrative and General Expense* \_\_\_\_\_  
*Total Operating and Maintenance Expenses* \$ \_\_\_\_\_  
*Net Operating Income* \$ \_\_\_\_\_

**C. Non-Operating Income:**

*Interest on Deposits* \$ \_\_\_\_\_  
*Other (Identify)* \_\_\_\_\_  
*Total Non-Operating Income* \$ \_\_\_\_\_

**D. Net Income**

\$ \_\_\_\_\_

**E. Debt Repayment:**

*RUS Interest* \$ \_\_\_\_\_  
*RUS Principal* \_\_\_\_\_  
*Non-RUS Interest* \_\_\_\_\_  
*Non-RUS Principal* \_\_\_\_\_  
*Total Debt Repayment* \$ \_\_\_\_\_

**F. Balance Available for Coverage**

\$ \_\_\_\_\_

**XXIX. PROPOSED OPERATING BUDGET - (SEWER SYSTEM) - NEW USERS -  
EXTENSION ONLY (1st Full Year of Operation) Year Ending \_\_\_\_\_**

**A. Operating Income:**

*Sewer Revenue* \$ \_\_\_\_\_  
*Late Charge Fees* \_\_\_\_\_  
*Other (Describe)* \_\_\_\_\_  
*Less Allowances and Deductions* ( \_\_\_\_\_ )  
*Total Operating Income* \$ \_\_\_\_\_

**B. Operation and Maintenance Expenses:**

*(Based on Uniform System of Accounts prescribed by National Association of  
Regulatory Utility Commissioners)*

*Operation Expense* \$ \_\_\_\_\_  
*Maintenance Expense* \_\_\_\_\_  
*Customer Accounts Expense* \_\_\_\_\_  
*Administrative and General Expense* \_\_\_\_\_  
*Total Operating and Maintenance Expenses* \$ \_\_\_\_\_  
*Net Operating Income* \$ \_\_\_\_\_

**C. Non-Operating Income:**

*Interest on Deposits* \$ \_\_\_\_\_  
*Other (Identify)* \_\_\_\_\_  
*Total Non-Operating Income* \$ \_\_\_\_\_

**D. Net Income**

\$ \_\_\_\_\_

**E. Debt Repayment:**

*RUS Interest* \$ \_\_\_\_\_  
*RUS Principal* \_\_\_\_\_  
*Non-RUS Interest* \_\_\_\_\_  
*Non-RUS Principal* \_\_\_\_\_  
*Total Debt Repayment* \$ \_\_\_\_\_

**F. Balance Available for Coverage**

\$ \_\_\_\_\_

KY7A PROPOSED OPERATING BUDGETS  
 Sheets 31,32,+33

		EXISTING SYSTEM 9/97-9/98	EXISTING SYSTEM AND NEW USERS Year ending 2001	NEW USERS ONLY Year ending 2001
A	WATER SALES	1418384	1,473,937	55,553
	DISC./RECON./LATE CHARGES	40868	40,868	0
	OTHER	160	160	0
	TOTAL OPERATING INCOME	1,459,412	1,514,965	55,553
B	SOURCE OF SUPPLY	300900	311,560	10,660
	PUMPING	14843	18,462	3,619
	WATER TREATMENT	0	0	0
	TRANS. & DIST.	180315	197,131	16,816
	CUST. ACCTS.	96858	102,138	5,280
	ADMIN. & GEN.	26038	27,385	1,347
	TOTAL OPERATING EXPENSES	618,954	656,676	37,722
	NET OPERATING INCOME	840,458	858,289	17,831
C	INT. ON DEPOSITS	25600	25,600	0
	OTHER			
	TOTAL NON OPER. INCOME	25600	25,600	0
D	NET INCOME	866,058	883,889	17,831
E	FmHA INTEREST	323250	368,250	45,000
	FmHA PRINCIPAL	111000	121,000	10,000
	TOTAL DEBT REPAYMENT	434,250	489,250	55,000
F	BALANCE OF COV. & DEP.	431,808	394,639	(37,169)

XXX. CURRENT OPERATING BUDGET - (WATER SYSTEM)  
 (As of the last full operating year.) 09/97 - 09/98

A. Operating Income:

Water Sales	\$ <u>1,418,384</u>
Disconnect/Reconnect/Late Charge Fees	<u>40,868</u>
Other (Describe)	<u>160</u>
Less Allowances and Deductions	( <u>                    </u> )
Total Operating Income	\$ <u>1,459,412</u>

B. Operation and Maintenance Expenses:

(Based on Uniform System of Accounts prescribed by National Association of Regulatory Utility Commissioners)

Source of Supply Expense	\$ <u>300,900</u>
Pumping Expense	<u>14,843</u>
Water Treatment Expense	<u>0</u>
Transmission and Distribution Expense	<u>180,315</u>
Customer Accounts Expense	<u>96,858</u>
Administrative and General Expense	<u>26,038</u>
Total Operating Expenses	\$ <u>618,954</u>
Net Operating Income	\$ <u>840,458</u>

C. Non-Operating Income:

Interest on Deposits	\$ <u>25,600</u>
Other (Identify)	<u>0</u>
Total Non-Operating Income	\$ <u>25,600</u>

D. Net Income

\$ 866,058

E. Debt Repayment:

RUS Interest	\$ <u>323,250</u>
RUS Principal	<u>111,000</u>
Non-RUS Interest	<u>0</u>
Non-RUS Principal	<u>0</u>
Total Debt Repayment	\$ <u>434,250</u>

F. Balance Available for Coverage

\$ 431,808

XXXI. PROPOSED OPERATING BUDGET - (WATER SYSTEM) - EXISTING SYSTEM  
AND NEW USERS (1st Full Year of Operation) Year Ending 2001

A. Operating Income:	
Water Sales	\$ <u>1,473,937</u>
Disconnect/Reconnect/Late Charge Fees	<u>40,868</u>
Other (Describe)	<u>160</u>
Less Allowances and Deductions	<u>( 0 )</u>
Total Operating Income	\$ <u>1,514,965</u>
B. Operation and Maintenance Expenses:	
(Based on Uniform System of Accounts prescribed by National Association of Regulatory Utility Commissioners)	
Source of Supply Expense	\$ <u>311,560</u>
Pumping Expense	<u>18,462</u>
Water Treatment Expense	<u>0</u>
Transmission and Distribution Expense	<u>197,131</u>
Customer Accounts Expense	<u>102,138</u>
Administrative and General Expense	<u>27,385</u>
Total Operating Expenses	\$ <u>656,676</u>
Net Operating Income	\$ <u>858,289</u>
C. Non-Operating Income:	
Interest on Deposits	\$ <u>25,600</u>
Other (Identify)	<u>0</u>
Total Non-Operating Income	\$ <u>25,600</u>
D. Net Income	\$ <u>883,889</u>
E. Debt Repayment:	
RUS Interest	\$ <u>368,250</u>
RUS Principal	<u>121,000</u>
Non-RUS Interest	<u>0</u>
Non-RUS Principal	<u>0</u>
Total Debt Repayment	\$ <u>489,250</u>
F. Balance Available for Coverage	\$ <u>394,639</u>

**XXXII. PROPOSED OPERATING BUDGET - (WATER SYSTEM) - NEW USERS -  
EXTENSION ONLY (1st Full Year of Operation)      Year Ending 2001**

**A. Operating Income:**

Water Sales	\$ <u>55,553</u>
Disconnect/Reconnect/Late Charge Fees	<u>0</u>
Other (Describe)	<u>0</u>
Less Allowances and Deductions	<u>( 0 )</u>
<b>Total Operating Income</b>	<b>\$ <u>55,553</u></b>

**B. Operation and Maintenance Expenses:**

(Based on Uniform System of Accounts prescribed by National Association of  
Regulatory Utility Commissioners)

Source of Supply Expense	\$ <u>10,660</u>
Pumping Expense	<u>3,619</u>
Water Treatment Expense	<u>0</u>
Transmission and Distribution Expense	<u>16,816</u>
Customer Accounts Expense	<u>5,280</u>
Administrative and General Expense	<u>1,347</u>
<b>Total Operating Expenses</b>	<b>\$ <u>37,722</u></b>
<b>Net Operating Income</b>	<b>\$ <u>17,831</u></b>

**C. Non-Operating Income:**

Interest on Deposits	\$ <u>0</u>
Other (Identify)	<u>0</u>
<b>Total Non-Operating Income</b>	<b>\$ <u>0</u></b>

**D. Net Income**

\$ 17,831

**E. Debt Repayment:**

RUS Interest	\$ <u>45,000</u>
RUS Principal	<u>10,000</u>
Non-RUS Interest	<u>0</u>
Non-RUS Principal	<u>0</u>
<b>Total Debt Repayment</b>	<b>\$ <u>55,000</u></b>

**F. Balance Available for Coverage**

\$ (37,169)

**XXXIII. ESTIMATED PROJECT COST - SEWER**  
*(Round to nearest \$100)*

	<u>Collection</u>	<u>Treatment</u>	<u>Total</u>
<i>Development</i>	_____	_____	_____
<i>Land and Rights</i>	_____	_____	_____
<i>Legal</i>	_____	_____	_____
<i>Engineering</i>	_____	_____	_____
<i>Interest</i>	_____	_____	_____
<i>Contingencies</i>	_____	_____	_____
<i>Initial Operating and Maintenance</i>	_____	_____	_____
<i>Other</i>	_____	_____	_____
<b>TOTAL</b>	_____	_____	_____

**XXXIV. PROPOSED PROJECT FUNDING - SEWER**

	<u>Collection</u>	<u>Treatment</u>	<u>Total</u>
<i>Applicant - User Contribution Fees</i>	_____	_____	_____
<i>Other - Applicant Contribution</i>	_____	_____	_____
<i>RUS Loan</i>	_____	_____	_____
<i>RUS Grant</i>	_____	_____	_____
<i>ARC Grant (If applicable)</i>	_____	_____	_____
<i>CDBG (If applicable)</i>	_____	_____	_____
<i>Other (Specify)</i>	_____	_____	_____
<i>Other (Specify)</i>	_____	_____	_____

XXXV. ESTIMATED PROJECT COST - WATER

Development	\$ <u>1,687,000</u>
Land and Rights	<u>15,000</u>
Legal	<u>14,500</u>
Engineering	<u>166,500</u>
Interest	<u>47,000</u>
Contingencies	<u>101,950</u>
Initial Operating and Maintenance	<u>                    </u>
Other (Administrative)	<u>18,000</u>
TOTAL	\$ <u>2,049,950</u>

XXXVI. PROPOSED PROJECT FUNDING

Applicant - User Connection Fees	\$ <u>49,950</u>
Other Applicant Contribution	<u>                    </u>
RUS Loan	<u>1,000,000</u>
RUS Grant	<u>500,000</u>
ARC Grant (If applicable)	<u>                    </u>
CDBG (If applicable)	<u>                    </u>
Other (Specify) State of Kentucky Grant	<u>500,000</u>
Other (Specify)	<u>                    </u>
TOTAL	\$ <u>2,049,950</u>

RECEIVED

SEP 27 1999

PUBLIC SERVICE  
COMMISSION

**CONTRACT I  
GRAYSON COUNTY WATER DISTRICT  
PROJECT 11  
GRAYSON COUNTY, KENTUCKY**

**AUGUST 1999**

**Prepared By:**

**Haworth, Meyer & Boleyn, Inc.  
3 HMB Circle  
Frankfort, Kentucky 40601**

## TABLE OF CONTENTS

1.	Advertisement for Bids .....	AD-1 to AD-3
2.	Information for Bidders .....	IB-1 to IB-3
3.	General Conditions .....	GC-1 to GC-32
4.	General Conditions-RUS .....	GC-RUS-1 to GC-RUS-22
5.	Supplemental General Conditions - RUS .....	SGC-RUS-1 to SGC-RUS-9
6.	Labor Regulations .....	LR-1 to LR-23
7.	Payment & Performance Bonds .....	PB-1 to PB-6
8.	Contract Agreement .....	CON-1 to CON-6
9.	Notice of Award .....	NA-1
10.	Notice to Proceed .....	NP-1
11.	Change Order Format .....	CO-1
12.	DOT Permits .....	DOT-1 to DOT-24
13.	Detailed Specifications	
	Section 1 - GENERAL SCOPE AND SPECIAL PROVISIONS .....	DS-1-1 to DS-1-6
	Section 2 - QUALITY ASSURANCE .....	DS-2-1 to DS-2-6
	Section 3 - WATER LINES AND WATER SERVICES .....	DS-3-1 to DS-3-17
	Section 4 - WATERSHED BOOSTER PUMPING STATION ...	DS-4-1 to DS-4-19
	Section 5 - BASIS OF PAYMENT .....	DS-5-1 to DS-5-3
14.	Bid Schedule .....	BS-1 to BS-12

ADVERTISEMENT FOR BIDS

CONTRACT I

GRAYSON COUNTY WATER DISTRICT  
PROJECT 11

AUGUST 1999

Sealed proposals for the following work will be received by the Grayson County Water District at 113 South Lee Avenue, Leitchfield, Kentucky 42755 until 2:00 P.M. CST (local time) September 8, 1999, for furnishing labor and materials and performing all work as set forth in this Advertisement for Bids, General Conditions, Specifications and/or Drawings prepared by Haworth, Meyer & Boleyn, Inc., 3 HMB Circle, US 460, Frankfort, Kentucky 40601.

Immediately following the scheduled closing time for the reception of bids, all proposals which have been submitted in accordance with the above conditions will be publicly opened and read aloud.

The work to be bid upon is described as follows:

38,000 L.F.  $\pm 6$ " PVC Water Main & Appurtenances  
400 L.F.  $\pm 4$ " D.I.P. Water Main & Appurtenances  
85,000 L.F.  $\pm 4$ " PVC Water Main & Appurtenances  
3 - Automatic Air Release Valve Stations  
1 - Booster Pump Station

Drawings, Specifications and Contract Documents may be examined at the following places:

Grayson County Water District  
113 South Lee Avenue  
Leitchfield, KY 42755

Haworth, Meyer & Boleyn, Inc.  
3 HMB Circle, US 460  
Frankfort, KY 40601

F.W. Dodge Corporation  
One Paragon Centre-Suite 230  
2525 Harrodsburg Road  
Lexington, KY 40504

Associated General Contractors  
2321 Fortune Drive, Suite 112  
Lexington, KY 40509

Builder's Exchange of Louisville  
2300 Meadow Drive  
P.O. Box 5398  
Louisville, KY 40205

F.W. Dodge/ABC Planroom  
1812 Taylor Avenue  
Louisville, KY 40213

or may be obtained from Lynn Blue Print & Supply Company, 328 Old East Vine Street, Lexington, KY 40507 upon receipt of a non-refundable payment as follows:

Contract I - Grayson County Water District  
Project 11 \$ 150.00 per set

After award of a contract, the General Contractor will be furnished, without charge, a reasonable number of plans and specifications needed to prosecute the work. Subcontractors and manufacturers and suppliers shall obtain plans and specifications from the General Contractor.

Sealed proposals for the Contract shall be clearly marked on the outside of the container as follows:

"Sealed proposal for Contract I - Grayson County Water District - Project 11.  
Not to be opened until 2:00 P.M. CST (local time), September 8, 1999  
(time and date of bid opening)

"The following addenda have been received and considered in the enclosed proposal:"

Addendum No.\_\_\_\_ Addendum No.\_\_\_\_ Addendum No.\_\_\_\_

Time allowed for completion of Contract I is 120 days

If forwarded by mail, the sealed envelope containing the proposal must be enclosed in another envelope and mailed to the Grayson County Water District, 113 South Lee Avenue, Leitchfield, Kentucky 42755 allowing sufficient time for such mailing to reach this address prior to the scheduled closing time for the receipt of proposals.

Bids shall be accompanied by a certified check or bid bond payable to the Grayson County Water District in an amount not less than five percent (5%) of the base bid. No bidder may withdraw his bid for a period of ninety (90) days after the date bids are opened. He may, however, withdraw his bid at any time prior to the time and date scheduled for opening of same or any authorized postponement thereof. Any bid received after the time and date specified will not be considered and will be returned unopened to the bidder.

The Grayson County Water District reserves the right to reject any and all bids and to waive formalities and any bid that is obviously unbalanced may be rejected.

Bidders must comply with the President's Executive Order Nos. 11246 and 11375, which prohibit discrimination in employment regarding race, creed, color, sex, or national origin. Bidders must

COMPLY WITH Title VI of the Civil Rights Act of 1964, the Anti-Kickback Act, Section 3 Segregated Facilities, Section 109 and the Contract Work Hours Standard Act.

Bidders must certify that they do not, and will not, maintain or provide for their employees any facilities that are segregated on the basis of race, color, creed or national origin.

Federal law prohibits discrimination on the grounds of race, color, national origin, religion, age, handicap, and sex in this project. Minority firms are particularly encouraged to participate.

For those projects with HUD-CDBG Funding, the Agency shall require a telephone Telecommunication Device for the Deaf (TDD) has been established via an 800 number for the hearing impaired. Call 1-800-247-2510 and an "interpreter" will connect the caller with the requested person/state office.

Edwin Nichols  
Chairman

The OWNER shall provide to BIDDERS prior to BIDDING, all information which is pertinent to, and delineates and describes, the land owned and rights-of-way acquired or to be acquired.

The CONTRACT DOCUMENTS contain the provisions required for the construction of the PROJECT. Information obtained from an officer, agent, or employee of the OWNER or any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve the contractor from fulfilling any of the conditions of the contract.

Each BID must be accompanied by a BID bond payable to the OWNER for five percent of the total amount of the BID. As soon as the BID prices have been compared, the OWNER will return the BONDS of all except the three lowest responsible BIDDERS. When the Agreement is executed the bonds of the two remaining unsuccessful BIDDERS will be returned. The BID BOND of the successful BIDDER will be retained until the payment BOND and performance BOND have been executed and approved, after which it will be returned. A certified check may be used in lieu of a BID BOND.

A performance BOND and a payment BOND each in the amount of 100 percent of the CONTRACT PRICE, with a corporate surety approved by the OWNER, will be required for the faithful performance of the contract.

Attorneys-in-fact who sign BID BONDS or payment BONDS and performance BONDS must file with each BOND a certified and effective dated copy of their power of attorney.

The party to whom the contract is awarded will be required to execute the Agreement and obtain the performance BOND and payment BOND within ten (10) calendar days from the date when NOTICE OF AWARD is delivered to the BIDDER. The NOTICE OF AWARD shall be accompanied by the necessary Agreement and BOND forms. In case of failure of the BIDDER to execute the Agreement, the OWNER may consider the BIDDER in default, in which case the BID BOND accompanying the proposal shall become the Property of the OWNER.

The OWNER within ten (10) days of receipt of acceptable performance BOND, payment BOND and Agreement signed by the party to whom the Agreement was awarded shall sign the Agreement and return to such party an executed duplicate of the Agreement. Should the OWNER not execute the Agreement within such period, the BIDDER may by WRITTEN NOTICE withdraw the signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER.

The NOTICE TO PROCEED shall be issued within ten (10) days of the execution of the Agreement by the OWNER. Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period, the time may be extended by mutual agreement between the OWNER AND CONTRACTOR. If the NOTICE TO PROCEED has not been issued within the ten (10) day period or within the period mutually agreed upon, the CONTRACTOR may terminate the Agreement without further liability on the part of either party.

The OWNER may make such investigations as deemed necessary to determine the ability of the BIDDER to perform the WORK, and the BIDDER shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any BID if the evidence submitted by, or investigation of, such BIDDER fails to satisfy the OWNER that such BIDDER is properly qualified to carry out the obligations of the Agreement and to complete the WORK contemplated therein.

A conditional or qualified BID will not be accepted.

Award will be made to the lowest responsible BIDDER.

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the PROJECT shall apply to the contract throughout.

Each BIDDER is responsible for inspecting the site and for reading and being thoroughly familiar with the CONTRACT DOCUMENTS. The failure or omission of any BIDDER to do any of the foregoing shall in no way relieve any BIDDER from any obligation in respect to its BID.

Further, the BIDDER agrees to abide by the requirements under Executive Order No. 11246, as amended, including specifically the provisions of the equal opportunity clause set forth in the SUPPLEMENTAL GENERAL CONDITIONS.

The low BIDDER shall supply the names and addresses of major material SUPPLIERS and SUBCONTRACTORS when required to do so by the OWNER.

Inspection trips for prospective BIDDERS will leave from the office of the none scheduled  
at \_\_\_\_\_

The ENGINEER IS Haworth, Meyer & Boleyn, Inc.

The ENGINEER'S address is 3 HMB Circle, U.S. 460, Frankfort, KY 40601

## GENERAL CONDITIONS

1. DEFINITIONS
2. CONTRACT AND CONTRACT DOCUMENTS
3. SCHEDULES, REPORTS AND RECORDS
4. ADDITIONAL INSTRUCTIONS AND DETAILED DRAWINGS
5. DRAWINGS AND SPECIFICATIONS
6. SHOP OR SETTING DRAWINGS
7. MATERIALS, SERVICES AND FACILITIES
8. CONTRACTOR'S TITLE TO MATERIALS
9. INSPECTION AND TESTING
10. SUBSTITUTIONS
11. PATENTS
12. SURVEYS, PERMITS, AND REGULATIONS
13. PROTECTION OF WORK, PROPERTY AND PERSONS
14. CONTRACTOR'S OBLIGATION FOR SUPERVISION
15. CHANGES IN WORK
16. CHANGES IN CONTRACT PRICE
17. TIME FOR COMPLETION AND LIQUIDATED DAMAGES
18. CORRECTION OF WORK
19. SUBSURFACE CONDITIONS
20. SUSPENSION OF WORK, TERMINATION AND DELAY
21. PAYMENTS TO CONTRACTOR
22. PAYMENTS BY CONTRACTOR
23. ACCEPTANCE OF FINAL PAYMENT AS RELEASE
24. CONTRACTOR'S AND SUBCONTRACTOR'S INSURANCE
25. CONTRACT SECURITY.

26. ASSIGNMENTS
27. INDEMNIFICATION
28. SEPARATE CONTRACTS
29. SUBCONTRACTING
30. ENGINEERS AUTHORITY
31. LAND AND RIGHTS-OF-WAY
32. GUARANTEE
33. ARBITRATION
34. TAXES
35. USE OF PREMISES AND REMOVAL OF DEBRIS
36. QUANTITIES OF ESTIMATES
37. CONFLICTING CONDITIONS
38. NOTICE AND SERVICE THEREOF
39. REQUIRED PROVISIONS DEEMED INSERTED
40. SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION
41. LABOR STANDARDS
42. INTEREST OF FEDERAL, STATE OR LOCAL OFFICIALS
43. OTHER PROHIBITED INTERESTS
44. EXISTING UTILITIES
45. STANDARD SPECIFICATIONS
46. SANITARY FACILITIES
47. SUPERVISION OF INSTALLATION
48. AIR AND WATER POLLUTION CONTROL
49. USE OF CHEMICALS
50. DAMAGE TO EXISTING LANDSCAPING, PAVEMENT, STRUCTURES,  
SIDEWALKS, CURBS, ETC.

1. DEFINITIONS

- 1.1 The following terms used in the Contract Documents shall be applicable to both the singular and plural and be defined as follows:
- 1.2 Addenda - Instructions, either written or graphic issued prior to the execution of the Agreement or portions thereof which modify or interpret the Contract Documents, Drawings, and Specifications, by deletions, additions, clarifications or corrections.
- 1.3 Bid - The proposal or offer submitted by the Bidder on prescribed forms setting forth prices for work to be performed.
- 1.4 Bidder - A person, firm or corporation submitting a Bid for the proposed work.
- 1.5 Bonds - Instruments of Security in the form of Bid, Performance or Payment Bonds, furnished by the Contractor and surety in accordance with Contract Documents.
- 1.6 Change Order - A written order to the Contractor authorizing revisions, deletions, or additions to the work within the general scope of the Contract Documents, or authorizing an adjustment in the Contract Price or Contract Time.
- 1.7 Contract Documents - The Contract and all other instruments associated with the Contract including Advertisement For Bids, Information For Bidders, Bid, Bid Bond, Agreement, Payment Bond, Performance Bond, Notice of Award, Notice To Proceed, Change Orders, Drawings, Specifications and Addenda.
- 1.8 Contract Price - The total sum of monies payable to the Contractor under the conditions and terms set forth in the Contract Documents.
- 1.9 Contract Time - The number of calendar days set forth in the Contract Documents for completion of the work.
- 1.10 Contractor - A person, firm or corporation with whom the Owner has executed a Contract or Agreement.
- 1.11 Drawings - A portion of the Contract Documents that illustrate the characteristics and scope of Work to be performed and which have been prepared and approved by the Engineer and appropriate Regulatory Agencies.
- 1.12 Engineer - The person, firms or corporations named as such in the Contract Documents.

- 1.13 Field Order - A written notice or order issued by the Engineer effecting a change in the Work that does not result in an amendment in Contract Price or Contract Time.
- 1.14 Notice of Award - A written notice issued by the Owner to the Bidder accepting his Bid.
- 1.15 Notice to Proceed - A written document issued by the Owner to the Contractor authorizing initiation of the Work and firmly establishing the date of initiation of such Work.
- 1.16 Owner - The public body or authority for whom the Work is being performed.
- 1.17 Project - A task to be performed as set forth in the Contract Documents.
- 1.18 Resident Project Representative - An authorized representative of the Owner that is assigned to the Project site or any portion thereof.
- 1.19 Shop Drawings - Diagrams, brochures, schedules, drawings, and other data that have been prepared by the Contractor, Subcontractor, manufacturers, suppliers, or distributors, that illustrates installations or fabrication of specific portions of the Work.
- 1.20 Specifications - A portion of the Contract Documents that contains written descriptions concerning materials, equipment, construction methods, standards, and workmanship.
- 1.21 Subcontractor - An individual, firm or corporation having a direct contract with the Contractor or with any other Subcontractor for the performance of the Work.
- 1.22 Substantial Completion - The date certified by the Engineer that construction on the Project or any portion thereof is sufficiently complete, in accordance with Contract Documents to permit the Project or portions thereof to be utilized for the purpose intended.
- 1.23 Supplemental General Conditions - Modifications to the General Conditions that may be required by the Federal, State, or Local agencies for participation in the Project and approved in writing by the agency prior to inclusion in the Contract Documents or such requirements that may be imposed by applicable state law.

- 1.24 Supplier - Any person, firm or organization that supplies material or equipment for accomplishing the Work, including fabrication, but does not perform labor at the Work site.
- 1.25 Work - Labor, materials, and equipment necessary to satisfy the construction requirements by the Contractor in accordance with the Contract Documents.
- 1.26 Written Notice - A written communication to any party of the Agreement. Such notices will be considered delivered when posted by certified or registered mail to the last known address of the addressee or when hand delivered to addressee or his authorized representative.

## 2. CONTRACT AND CONTRACT DOCUMENTS

Plans, Specifications and Addenda shall form a part of the contract and the provisions thereof shall be as binding upon the parties hereto as if they were fully set forth herein. Tables of Content, Titles, and Headings contained in said documents are solely for the purpose of reference and have no limiting effect of the interpretation of the provisions to which referenced.

## 3. SCHEDULES, REPORTS AND RECORDS

- 3.1 The Contractor shall submit to the Owner such schedules of quantities, costs, progress reports, estimates, record and other information as may be requested by the Owner.
- 3.2 The Contractor shall, within five days after the work commences on the contract or another period of time determined by the Owner/Engineer, prepare and submit to the Owner/Engineer for approval three copies of a practicable schedule showing the order in which the Contractor proposes to perform the work, and the dates on which the Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Contractor fails to submit a schedule within the time prescribed, the Owner/Engineer may withhold approval of progress payments until the Contractor submits the required schedule.

- 3.3 The Contractor shall enter the actual progress on the chart as directed by the Owner/Engineer, and upon doing so shall immediately deliver three copies of the annotated schedule to the Owner/Engineer. If, in the opinion of the Owner/Engineer, the Contractor falls behind the approved schedule, the Contractor shall take steps necessary to improve its progress, including those that may be required by the Owner/Engineer, without additional cost to the Owner. In this circumstance, the Owner/Engineer may require the Contractor to increase the number of shifts, overtime operations, days of work, and/or the amount to construction plant, and to submit for approval any supplementary schedule or schedules in chart form as the Owner/Engineer deems necessary to demonstrate how the approved rate of progress will be regained.
- 3.4 The Contractor shall also furnish on forms supplied by the Owner (a) a detailed estimate giving a complete breakdown of the Contract Price and (b) periodic itemized estimates of Work done for the purpose of making partial payments thereon. The cost employed in making up any of these schedules will be used only for determining the basis of partial payments and will not be considered as fixing a basis for additions to or deduction from the Contract Price.
- 3.5 The Contractor will also submit dates for submission of Shop Drawings, the beginning of manufacture, testing and installation of materials, equipment and supplies. The Contractor shall also submit dates that special detail drawings will be required, if any, by the Engineer.
- 3.6 Failure of the Contractor to comply with the requirements of the Owner/Engineer under this clause shall be grounds for a determination by the Owner/Engineer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the contract. Upon making this determination, the Owner/Engineer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the terms of this contract.

4. ADDITIONAL INSTRUCTIONS AND DETAILED DRAWINGS

- 4.1 The Contractor will be provided with additional instructions and detailed small letters Drawings as necessary to carry out the Work set forth in the Contract Documents.

4.2 Additional drawings and instructions supplied to the Contractor will become a part of the Contract Documents. In the event of conflict between additional drawings and instructions and the Contract Documents, the Contractor shall notify the Engineer immediately in writing.

5. DRAWINGS AND SPECIFICATIONS

5.1 The Drawings, Specifications, and Addenda shall become a part of the Contract Documents and are provided with the intent that the Contractor shall furnish all labor, materials, tools, equipment and transportation necessary for proper execution of the Work in accordance with the Contract Documents and all other incidental work necessary to complete the Project in an acceptable manner, ready for use, occupancy or operation by the Owner.

5.2 The Engineer, without charge, will furnish to the Contractor not more than eight (8) sets of the Plans and Specifications. If additional sets of documents are required by the Contractor for the proper handling of the Work, such documents will be furnished to the Contractor at cost.

5.3 Should there be conflict between Drawings and Specifications, the Specifications shall govern and detailed Drawings shall govern over general Drawings. Figure dimensions on Drawings shall govern over scale dimensions.

5.4 All work or materials shown on the Plans and not mentioned in the Specifications or any work specified and not shown on the Plans, shall be furnished, performed, and done by the Contractor as if the same were both mentioned in the Specifications and shown on the Plans.

5.5 Should the Contractor in preparing his Bid find anything necessary for the construction of the Project that is not mentioned in the Specifications or shown on the Plans, or find any other discrepancy in the Specifications, Plans or Contract Documents, he shall notify the Engineer so that such discrepancies may be corrected by addendum prior to the letting. Should the Contractor fail to notify the Engineer of such discrepancies, it will be assumed that his Bid included everything necessary for the complete construction in the spirit and intent of the designs shown.

5.6 In the event the Contractor should note discrepancies between the Drawings and the Specifications, and site conditions or any other inconsistencies, or ambiguities, such inconsistencies or ambiguities shall be reported immediately to the Engineer in writing. The Engineer shall promptly correct such inconsistencies or ambiguities in writing. Any Work done by the Contractor subsequent to his discovery of such inconsistencies or ambiguities shall be done at the Contractor's risk.

5.7 The Contractor shall, during the course of the construction, maintain an updated set of plans, marked by the Contractor, showing all deviations from the original and such notes as required to clarify the cause of such deviations and showing final locations of underground utilities such as sewer service connections and buried valves by giving offset distances to surface improvements such as building corners, curbs, manholes, etc. The purpose of these updated plans are to facilitate the completion of the record drawings by the Engineer after the completion of the Work. Nothing in this section shall be construed to relieve the Contractor from obtaining the Engineer's prior written approval for any deviation from the Plans or Specifications.

## 6. SHOP OR SETTING DRAWINGS

6.1 The Contractor shall promptly submit to the Engineer four (4) copies of each Shop Drawing regarding proposed materials and equipment to be supplied for the project. Subsequent to examination of such Shop Drawings by the Engineer and the return thereof, the Contractor shall make such corrections to the Shop Drawings as have been indicated and shall furnish the Engineer with two (2) corrected copies. Regardless of corrections made on or review given to such Shop Drawings by the Engineer, any Shop Drawing which substantially deviates from the requirements of the Contract Documents shall be evidenced by a Change Order. Review of Shop Drawings by the Engineer shall in no way relieve the Contractor from responsibility for deviations from the Contract Documents unless specifically stated in writing by the Engineer.

6.2 Work requiring the submission of a Shop Drawing by the Contractor shall not be initiated until the Shop Drawing has been submitted to and reviewed by the Engineer. The Contractor shall certify to the Engineer that he has checked and approved the Shop Drawings and that they are in accordance with the requirements of the Contract Documents.

## 7. MATERIALS, SERVICES AND FACILITIES

- 7.1 Except as otherwise stated in the Contract Documents, the Contractor shall furnish any pay for all materials, labor, tools, equipment, utilities, transportation, supervision, temporary construction and all other services and facilities required in the execution, completion and delivery of the Work in accordance with the Contract Documents.
- 7.2 Storage of materials and equipment to be used in the Project shall be accomplished in a manner to insure security, preservation of quality, and suitability for incorporation in the Work.
- 7.3 Manufactured equipment and materials shall be installed, constructed and erected by the Contractor in strict accordance with the manufacturer's direction unless specifically directed otherwise in writing by the Engineer.
- 7.4 Manufactured equipment and materials to be used in the Project shall be the same as samples submitted to and approved by the Engineer. Second hand or salvaged materials will not be permitted unless specifically provided for in the Contract Documents.
- 7.5 Any Work necessary to be performed after regular hours, on Sundays or Legal Holidays, shall be performed without additional expense to the Owner.

## 8. CONTRACTOR'S TITLE TO MATERIALS

No manufactured equipment, materials, or supplies to be used in the Work shall be purchased by the Contractor or Subcontractor subject to any chattel mortgage, conditional sales contract or other agreement by which an interest is retained by the Seller. The Contractor and Subcontractor shall warrant that he has good title to all materials and supplies used by him in the Work, free of all liens, claims or encumbrances.

## 9. INSPECTION AND TESTING

- 9.1 All manufactured equipment, materials and supplies used in the construction of the Project shall be subject to inspection, testing, and observation in accordance with generally accepted standards as required and defined in the Contract Documents.
- 9.2 The cost of testing and inspection services required by the Contract Documents shall be borne by the Contractor unless otherwise specified.

- 9.3 All other inspection and testing services not required by the Contract Documents, shall be borne by the Owner.
- 9.4 In the event that Contract Documents, laws, ordinances, regulations, rules, orders or other directions of any public authority having jurisdiction over the Work requires specific inspection, testing or approval of someone other than the Contractor, the Contractor shall provide the Engineer timely notice of readiness and the Contractor shall furnish the Engineer with the required certificates of inspection, testing or approval as appropriate.
- 9.5 Neither observation by the Engineer nor inspections, tests, or approvals by others relieve the Contractor of his obligations to perform the Work as required in the Contract Documents.
- 9.6 The Engineer, Owner and their representatives shall have access to the Work at all times. In addition, representatives and agents of Federal, State and Local governments having jurisdiction of any portion of the Work shall be permitted to inspect the Work, materials, payrolls, records of personnel, invoices of materials and other relevant data and records, in accordance with Federal laws. Proper facilities shall be provided by the Contractor for such access, observation, inspection and testing of the Work.
- 9.7 Should any Work be covered contrary to the written instructions of the Engineer, such Work shall be uncovered for observation and replaced at the Contractor's expense.
- 9.8 Should any Work be covered which the Engineer has not specifically requested to observe prior to its being covered, or should the Engineer consider it necessary that such Work be inspected or tested by others, the Contractor, shall, at the Engineer's written request, uncover or otherwise expose the Work in question for observation, inspection or testing. The Contractor, shall furnish all labor, materials and equipment necessary to accomplish this purpose. If the Engineer determines that such work is defective or in conflict with the Contract Documents, the Contractor shall bear all expenses of such uncovering, exposure, observation, inspection or testing as well as satisfactory reconstruction. If such work is found not to be defective, the Contractor shall be allowed an increase in Contract Price or an extension of Contract Time or both, attributable to such uncovering, exposure, observation, and inspection. An appropriate Change Order shall be prepared and issued by the Engineer.

## 10. SUBSTITUTIONS

Whenever a material, article or equipment is identified on the Drawings or in the Specifications by brand name, manufacturer's name or catalog number, it shall be understood that such reference is for defining the performance, requirements, quality, capacity and other salient features of that being specified. The Contractor may recommend substitution, by brand name or catalog number, for materials, articles, or equipment provided it is of equal substance and function to that referred to in the Contract Documents. If, in the opinion of the Engineer, recommended alternates are of equal substance, function and capacity as that specified, the Engineer may approve the substitution and use by the Contractor. Any cost differential shall be adjusted in the Contract Price and the Contract Documents shall be modified by a Change Order. The Contractor shall warrant that if substitutions are approved, no major changes in function or general design of the Project will result. Incidental changes or extra component parts required to accommodate the substitute requested by the Contractor, shall be made by the Contractor without a change in Contract Time or Contract Price.

## 11. PATENTS

11.1 The Contractor shall hold and save the Owner and its officers, agents and employees harmless, from liability of any type, including cost and expenses for or on account of, any patented or unpatented inventions, process, or article manufactured and used in the performance of the Work and its intended use thereafter, unless otherwise stipulated in the Contract Documents.

11.2 If the Contractor uses any device, materials or designs covered by patent, copyright or letters, he shall provide for such use by obtaining a suitable agreement with the Owner of such patented or copyrighted material, device or design. It shall be understood and agreed by the Contractor that, without exception, the Contract Price shall include all royalties or costs arising from the use of such materials, devices and designs used in the Work. The Contractor or his Sureties shall indemnify and save harmless the Owner from any and all claims for infringement by reason of use of such patented or copyrighted device, materials, or design or any trademark in connection with the Work to be performed within the scope of the Contract Documents and shall indemnify the Owner for any costs, expenses or damage which by reason of infringement may be due and payable after completion of the Work.

## 12. SURVEYS, PERMITS, AND REGULATIONS

12.1 Land surveys and/or base lines for locating principal structures associated with the Project together with a suitable number of bench marks near the Work site will be furnished by the Owner and shown in the Contract Documents. Utilizing information provided by the Owner, the Contractor shall develop all detail surveys needed for construction, unless specified otherwise in the Contract Documents, including but not limited to slope stakes, batter boards, stakes for pile location, working points, line elevations and cut sheets.

12.2 The Contractor shall assure preservation of bench marks, and other reference points. In the event of willful or careless destruction, he shall be charged with the resulting expense and shall be held responsible for any errors or mistakes resulting from such loss of bench marks or other reference points.

12.3 Permits and licenses of a temporary nature necessary for the prosecution of the Work shall be secured and paid for by the Contractor unless otherwise stated in the Supplemental General Conditions or Special Conditions Permits, licenses and easements for permanent changes in existing facilities shall be secured and paid for by the Owner, unless otherwise specified. The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the Work as drawn and specified. If the Contractor observes that the Contract Documents are at variance therewith, he shall promptly notify the Engineer in writing, and any necessary changes shall be adjusted as provided in Section 15, Changes In Work.

## 13. PROTECTION OF WORK, PROPERTY AND PERSONS

13.1 The Contractor will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. He will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the Work and other persons who may be affected thereby, all the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

13.2 The Contractor will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. He will erect and maintain, as required by the conditions and progress of the Work, all necessary safeguards for safety and protection. He will notify owners of adjacent utilities when prosecution of the Work may affect them. The Contractor will remedy all damage, injury or loss to any property caused directly or indirectly in whole or in part by the Contractor, and subcontractor or anyone for whose acts any of them be liable.

13.3 In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the Engineer or Owner, shall act to prevent threatened damage, injury or loss. He will give the Engineer prompt Written Notice of any significant changes in the Work or deviations from the Contract Documents caused thereby, and a Change Order shall thereupon be issued covering the changes and deviations involved.

14. CONTRACTOR'S OBLIGATION FOR SUPERVISION

The Contractor will supervise and direct the Work. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The Contractor will employ and maintain on the Work a qualified supervisor or superintendent who shall have been designated by the Contractor as the Contractor's representative at the site. The supervisor shall have full authority to act on behalf of the Contractor and all communications given to the supervisor shall be as binding as if given to the Contractor. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the Work.

15. CHANGES IN WORK

15.1 The Owner may at any time, as the need arises, order changes within the scope of the Work without invalidating the Agreement. If such changes increase or decrease the amount due under the Contract Documents, or in the time required for performance of the Work, an equitable adjustment shall be authorized by Change Order.

15.2 The Engineer, also, may at any time, by issuing a Field Order, make changes in the details of the Work. The Contractor shall proceed with the performance of any changes in the Work so ordered by the Engineer unless the Contractor believes that such Field Order entitles him to a change in Contract Price or Time or both, in which event he shall give the Engineer written notice thereof within seven (7) days after receipt of the ordered change. Thereafter, the Contractor shall document the basis for the change in Contract Price or Time within thirty (30) days. The Contractor shall not execute such changes pending the receipt of an executed Change Order or further instruction from the Owner.

16. CHANGES IN CONTRACT PRICE

The Contract Price may be changed only by a Change Order. The value of any Work covered by a Change Order or of any claim for increase or decrease in the Contract Price shall be negotiated and determined by one or more of the following methods in the order of precedence listed below:

- (a) An agreed lump sum
- (b) The actual cost for labor, direct overhead, materials, supplies, equipment, and other services necessary to complete the Work. In addition, there shall be added an amount to be agreed upon but not to exceed fifteen (15) percent of the actual cost of the Work to cover the cost of general overhead and profit.

17. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

17.1 The date of beginning and the time for completion of the Contract Documents and the Work embraced shall be commenced on a date specified in the Notice to Proceed.

17.2 The Contractor will proceed with the Work at such a rate of progress to insure full completion within the Contract Time. It is expressly understood and agreed by and between the Contractor and the Owner that the Contract Time for the completion of the Work described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the Work.

17.3 If the Contractor shall fail to complete the Work within the Contract Time, or extension of time granted by the Owner, then the Contractor will pay to the Owner the amount for liquidated damages as specified in the Bid for each calendar day that the Contractor shall be in default after the time stipulated in the Contract Documents.

17.4 The Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the Work is due to the following and the Contractor has within seven calendar days given Written Notice of such delay to the Owner or Engineer.

17.4.1 To any preference priority or allocation order duly issued by the Owner.

17.4.2 To unforeseeable causes beyond the control and without the fault or negligence of the Contractor including but not restricted to acts of God or of the public enemy, acts of the Owner, acts of another Contractor in the performance of contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather.

17.4.3 To any delays of Subcontractors occasioned by any of the causes specified in paragraphs 17.4.1 and 17.4.2 of this article.

#### 18. CORRECTION OF WORK

18.1 The Contractor shall promptly remove from the premises all Work rejected by the Engineer for failure to comply with the Contract Documents, whether incorporated in the construction or not, and the Contractor shall promptly replace and re-execute the Work in accordance with the Contract Documents and without expense to the Owner and shall bear the expense of making good all Work of other Contractors destroyed or damaged by such removal or replacement.

18.2 All removal and replacement Work shall be done at the Contractor's expense. If the Contractor does not take action to remove such rejected Work within ten (10) days after receipt of Written Notice, the Owner may remove such Work and store the materials at the expense of the Contractor.

#### 19. SUBSURFACE CONDITIONS

19.1 The Contractor shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the Owner by Written Notice of:

19.1.1 Subsurface or latent physical conditions at the site differing materially from those indicated in the Contract Documents: or

19.1.2 Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the Contract Documents.

19.2 The Owner shall promptly investigate the conditions, and if he finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the Work, and equitable adjustment shall be made and the Contract Documents shall be modified by a Change Order. Any claim of the Contractor for adjustment hereunder shall not be allowed unless he has given the required Written Notice; provided that the Owner may, if he determines the facts so justify, consider and adjust any such claims asserted before the date of final payment.

19.3 Information such as rock soundings or soil borings shown on the plans depicting subsurface conditions are thought to be representative but cannot be guaranteed accurate. It is the Contractor's responsibility to make any additional investigations necessary to ascertain or verify subsurface conditions. If subsurface conditions different from those indicated on the plans are encountered during construction, there will be no increase in Contract Price unless provided by unit prices listed on the Bid Form or by Change Order.

## 20. SUSPENSION OF WORK, TERMINATION AND DELAY

20.1 The Owner may suspend the Work or any portion thereof for a period of not more than ninety (90) days or such further time as agreed upon by the Contractor, by Written Notice to the Contractor and the Engineer. Such Written Notice shall fix the date on which Work shall be resumed. The Contractor will resume that Work on the date so fixed. The Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension.

20.2 If the Contractor is adjudged as bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the Contractor or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to subcontractors or for labor, materials, equipment, or if he disregards laws, ordinances, rules, regulations, or orders of any public body having jurisdiction of the Work

or if he disregards the authority of the Engineer, or if he otherwise violates any provision of the Contract Documents, then the Owner may, without prejudice to any other right or remedy and after giving the Contractor and his Surety a minimum of ten (10) days from delivery of a Written Notice, terminate the services of the Contractor and take possession of the Project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor, and finish the Work by whatever method he may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct and indirect costs of completing the Project, including compensation for additional professional services, such excess shall be paid to the Contractor. If such costs exceed such unpaid balance, the Contractor will pay the difference to the Owner. Such cost incurred by the Owner will be determined by the Engineer and incorporated in a Change Order.

- 20.3 Where the Contractor's services have been so terminated by the Owner, said termination shall not affect any right of the Owner against the Contractor then existing or which may thereafter accrue. Any retention or payment of monies by the Owner due the Contractor will not release the Contractor from compliance with the Contract Documents.
- 20.4 After ten (10) days from delivery of a Written Notice to the Contractor and the Engineer, the Owner may without cause and without prejudice to any other right or remedy, elect to abandon the Project and terminate the Contract. In such case, the Contractor shall be paid for all Work executed and any expense sustained plus reasonable profit.
- 20.5 If through no act or fault of the Contractor, the Work is suspended for a period of more than ninety (90) days by the Owner or under an order of court or other public authority, or the Engineer fails to act on any request for payment within thirty (30) days of its approval and presentation, then the Contractor may, after ten (10) days from delivery of a Written Notice to the Owner and the Engineer, terminate the Contract and recover from the Owner payment for all Work executed and all expenses sustained. In addition and in lieu of terminating the Contract, if the Engineer has failed to act on a request for payment or if the Owner has failed to make any payment as aforesaid, the Contractor may upon ten (10) days Written Notice to the Owner and the Engineer, stop the Work until he has been paid all amounts then due, in which event and upon resumption of the Work, Change Orders shall be issued for adjusting the Contract Price

or extending the Contract Time or both to compensate for the costs and delays attributable to the stoppage of the Work.

- 20.6 In the event that the Owner or Engineer determine that the Work is not being done in accordance with the Contract Documents, including, but not limited to, the fact that the Contractor does not have adequate supervision on site in accordance with Section 14 (Contractor's Obligation For Supervision) of these General Conditions, the Contractor may be ordered to stop work until he is in compliance with the Contract Documents without an increase in contract amount or time for completion.

21. PAYMENTS TO CONTRACTOR

- 21.1 At least ten (10) days before each progress payment falls due (but not more often than once a month), the Contractor will submit to the Engineer a partial payment estimate filled out and signed by the Contractor covering the Work performed during the period covered by the partial payment estimate and supported by such data as the Engineer may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the Owner, as will establish the Owner's title to the material and equipment and protect his interest therein, including applicable insurance. The Engineer will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing his approval of payment and present the partial payment estimate to the Owner, or return the partial payment estimate to the Contractor indicating in writing his reasons for refusing to approve payment. In the latter case, the Contractor may make the necessary corrections and resubmit the partial payment estimate. The Owner will, within ten (10) days of presentation to him of an approved partial payment estimate, or at an earlier date if the Owner has received federal reimbursement funds to cover the payment estimate, pay the Contractor a progress payment on the basis of the approved partial payment estimate. The Owner shall retain ten (10) percent of the amount of each payment until 50% of the work is completed at which time the retainage may be reduced to 5% if satisfactory progress is being made. When the Work is substantially complete (operational or beneficial occupancy), the retained amount may be further reduced below five (5) percent to only that amount necessary to assure completion. On completion and acceptance of a part of the Work on which the price is stated separately in the Contract Documents, payment may be made in full,

including retained percentages, less authorized deductions.

- 21.2 The request for payment may also include all allowance for the cost of such major materials and equipment which are suitably stored either at or near the site.
- 21.3 Prior to Substantial Completion, the Owner with the approval of the Engineer and with the concurrence of the Contractor, may use any completed or substantially completed portions of the Work.
- 21.4 Performance of related work on the premises by the Owner or use of partially completed portions of the Work by the Owner shall in no way be construed as relieving the Contractor of the sole responsibility for completing all Work in accordance with the Contract Documents, for care and protection of the Work, and for restoration of any damaged Work except such as may be caused by agents or employees of the Owner.
- 21.5 Upon completion and acceptance of the Work, the Engineer shall issue a certificate attached to the final payment request that the Work has been accepted by him under the conditions of the Contract Documents, the entire balance found to be due the Contractor, including the retained percentages, but except such sums as may be lawfully retained by the Owner, shall be paid to the Contractor within thirty (30) days of completion and acceptance of the Work.
- 21.6 The Contractor will indemnify and save the Owner or the Owner's agents harmless from all claims growing out of the lawful demands of Subcontractors, laborers, workmen, mechanics, furnishers of materials and machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the Work. The Contractor shall, at the request of the Owner, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the Contractor fails to do so the Owner may, after having notified the Contractor, either pay unpaid bills or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed, in accordance with the terms of the Contract Documents, but in no event shall the provisions of this sentence be construed to impose any obligations upon the Owner to either the Contractor, his Surety, or any third party. In paying any unpaid bills of the Contractor, any payment so made by the Owner shall be considered as a payment made under the Contract Documents

by the Owner to the Contractor and the Owner shall not be liable to the Contractor for any such payments made in good faith.

22. PAYMENTS BY CONTRACTOR

The Contractor shall pay: (a) for all transportation and utility services not later than the 20th day of the calendar month following that in which services are rendered, (b) for all materials, tools, and other expendable equipment to the extent of 90% of the cost thereof, not later than the 20th day of the calendar month following that in which such materials, tools, and equipment are delivered at the site of the Project, and the balance of the cost thereof not later than the 30th day following the completion of that part of the Work in or on which such materials, tools, and equipment are incorporated or used, and (c) to each of his Subcontractors, not later than the 15th day following each payment to the Contractor, the respective amounts allowed the Contractor on account of the Work performed by his Subcontractors to the extent of each Subcontractor's interest therein.

23. ACCEPTANCE OF FINAL PAYMENT AS RELEASE

The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability to the Contractor other than claims in stated amounts as may be specifically excepted by the Contractor for all things done or furnished in connection with this Work and for every act and neglect of the Owner and others relating to or arising out of this Work. Any payment, however, final or otherwise, shall not release the Contractor or his sureties from any obligations under the Contract Documents of the Performance Bond and Payment Bonds.

24. CONTRACTOR'S AND SUBCONTRACTOR'S INSURANCE

24.1 The Contractor shall purchase and maintain such insurance as will protect him from claims set forth below which may arise out of or result from the Contractor's execution of the Work, whether such execution be by himself or by an Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

24.1.1 Claims under workmen's compensations, disability benefit and other similar employee benefit acts;

24.1.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of his employees;

- 24.1.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees;
- 24.1.4 Claims for damages insured by usual personal injury liability coverage which are sustained: (a) by any person as a result of an offense directly or indirectly related to the employment of such person by the Contractor, or (b) by any other person; and
- 24.1.5 Claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom.
- 24.2 All insurance to be procured and maintained by Contractor pursuant to this Contract shall be with Best A-rated companies acceptable to Owner, and certificates evidencing such insurance acceptable to Owner shall be filed with the Owner prior to commencement of the work. These certificates shall contain a provision that coverages afforded under the policies shall not be canceled unless at least fifteen (15) days prior written notice has been given to Owner. Owner shall be named as an additional insured on all said policies of insurance.
- 24.3 The Contractor shall procure and maintain, at his own expense during the Contract Time, liability insurance as hereinafter specified.
- 24.3.1 Contractor's General Public Liability and Property Damage Insurance including vehicle coverage issued to the Contractor and protecting him from all claims for destruction of or damage to property arising out of or in connection with any operations under the Contract Documents, whether such operations be by himself or by any Subcontractor under him, or anyone directly or indirectly employed by the Contractor or by a Subcontractor under him. Insurance shall be written with a limit of liability of not less than \$1,000,000 for all damages arising out of bodily injury, including death, at any time resulting therefrom, sustained by any one person in any one accident; and a limit of liability of not less than \$1,000,000 for all property damage sustained by any one person in any one accident; and a limit of liability of not less than \$3,000,000 aggregate for any damages arising out of bodily injury, including death at any time resulting therefrom sustained by two or more persons in any one accident.

24.3.2 The Contractor shall acquire and maintain, Fire and Extended Coverage Insurance upon the Project to the full insurable value thereof for the benefits of the Owner, the Contractor, and the Subcontractors as their interest may appear. This provision shall in no way release the Contractor or Contractor's Surety from obligations under the Contract Documents to fully complete the Project.

24.4 The Contractor shall procure and maintain, at his own expense, during the Contract Time, in accordance with the provisions of the laws of the state in which the Work is performed, Workmen's Compensation Insurance, including occupational disease provisions, for all of his employees at the site of the Project. In case of any work sublet, the Contractor shall require such Subcontractor similarly to provide Workmen's Compensation Insurance, including occupational disease provisions for all of the latter's employees unless such employees are covered by the protection afforded by the Contractor. In case any class of employees engaged in hazardous work under this contract at the site of the Project is not protected under Workmen's Compensation statute, the Contractor shall provide, and shall cause each Subcontractor to provide adequate and suitable insurance for the protection of his employees not otherwise protected.

24.5 The Contractor shall secure, "All Risk" type Builder's Risk Insurance of Work to be performed. Unless specifically authorized by the Owner, the amount of such insurance shall not be less than the Contract Price totaled in the Bid. The policy shall cover not less than the losses due to fire, explosion, hail, lightning, vandalism, malicious mischief, wind, collapse, riot, aircraft, and smoke during the Contract Time, and until the Work is accepted by the Owner. The policy shall name as the insured the Contractor, the Engineer, and the Owner. If the Builder's Risk Insurance excludes flood damage, the Contractor shall be required to secure the maximum amount of Federal Flood Insurance available for the Contract.

## 25. CONTRACT SECURITY

The Contractor shall within ten (10) days after receipt of the Notice of Award furnish the Owner with a Performance Bond and a Payment Bond in penal sums equal to the amount of the Contract Price conditioned upon the performance by the Contractor of all undertakings, covenants, terms, conditions, and agreements of the Contract Documents, and upon the prompt payment by the Contractor to all persons supplying labor and materials in the prosecution of the Work provided by the Contract Documents. Such Bonds shall be executed by the

Contractor and all corporate bonding company licensed to transact such business in the State where the Work is to be performed and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. The expense of these bonds shall be borne by the Contractor If at any time a surety on any such Bond is declared bankrupt or loses its right to do business in the State in which the Work is to be performed or is removed from the list of Surety Companies accepted on Federal Bonds, Contractor shall within ten (10) days after notice from the Owner to do so, substitute an acceptable Bond, (or Bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the Owner. The premiums on such Bond shall be paid by the Contractor. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable Bond to the Owner.

26. ASSIGNMENTS

Neither the Contractor nor the Owner shall sell, transfer, assign, or otherwise dispose of the Contract or any portion thereof, or of his right, title or interest therein, or his obligations thereunder, without written consent of the other party.

27. INDEMNIFICATION

27.1 The Contractor will indemnify and hold harmless the Owner and the Engineer and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the Work, provided that any such claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury or to destruction of tangible property including the loss of use resulting therefrom; and is caused in whole or in part by any negligent or willful act or omission of the Contractor, and Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

27.2 In any and all claims against the Owner or the Engineer, or any of their agents or employees, by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under Workmen's Compensation Acts, disability benefit acts or other employee benefits acts.

27.3 The obligation of the Contractor under this paragraph shall not extend to the liability of the Engineer, his agents or employees arising out of the preparation or approval of maps, Drawings, opinions, reports, surveys, Change Orders, designs or Specifications.

## 28. SEPARATE CONTRACTS

28.1 The Owner reserves the right to let other contracts in connection with this Project. The Contractor shall afford the Contractors reasonable opportunity for the introduction and storage of their materials and the execution of their Work, and shall properly connect and coordinate his Work with theirs. If the proper execution or results of any part of the Contractor's Work depends upon the Work of any other Contractor, the Contractor shall inspect and promptly report to the Engineer any defects in such Work that render it unsuitable for such proper execution and results.

28.2 The Owner may perform additional Work related to the Project by himself, or he may let other contracts containing provisions similar to these. The Contractor will afford the other Contractors who are parties to such Contracts (or the Owner, if he is performing the additional Work himself) reasonable opportunity for the introduction and storage of materials and equipment and the execution of Work, and shall properly connect and coordinate his work with theirs.

28.3 If the performance of additional Work by other Contractors or the Owner is not noted in the Contract Documents prior to the execution of the Contract, written notice thereof shall be given to the Contractor prior to starting any such additional Work. If the Contractor believes that the performance of such additional Work by the Owner or others involves him in additional expense or entitles him to an extension of the Contract Time, he may make a claim therefor as provided in Sections 16 and 17.

## 29. SUBCONTRACTING

29.1 The Contractor may utilize the services of specialty Subcontractors on those parts of the Work which, under normal contracting practices, are performed by specialty Subcontractors.

29.2 The Contractor shall not award any Work to any Subcontractor without prior written approval of the Owner, which approval will not be given until the Contractor submits to the Owner a written statement concerning the proposed award to the Subcontractor, which statement will contain such information as the Owner may require.

- 29.3 The Contractor shall be fully responsible to the Owner for the acts and omissions of his Subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of person directly or indirectly employed by him.
- 29.4 The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind Subcontractors to the Contractor by the terms of the General Conditions and other Contract Documents in so far as applicable to the Work of Subcontractors and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provision of the Contract Documents.
- 29.5 Nothing contained in this contract shall create any contractual relation between any Subcontractor and the Owner.
- 29.6 The Contractor will insert in any subcontracts the clauses contained in 29 CFR 5.5 (a) (1) through (5) and (7) and such other clauses and appropriate instructions as the Environmental Protection Agency may require, and also a clause requiring the Subcontractors to include these clauses in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.

30. ENGINEER'S AUTHORITY

- 30.1 The Engineer shall act as the Owner's representative during the construction period. He shall decide questions which may arise as to quality and acceptability of materials furnished and Work performed. He shall interpret the intent of the Contract Documents in a fair and unbiased manner. The Engineer will make visits to the site and determine if the work is proceeding in accordance with the Contract Documents.
- 30.2 The Contractor will be held strictly to the intent of the Contract Documents in regard to the quality of material, workmanship and execution of the Work. Inspections may be made at the factory or fabrication plant of the source of material supply.
- 30.3 The Engineer will not be responsible for the construction means, control, techniques, sequences, procedures, or construction safety.
- 30.4 The Engineer shall promptly make decisions relative to interpretation of the Contract Documents.

31. LAND AND RIGHTS-OF-WAY

- 31.1 Prior to issuance of the Notice to Proceed, the Owner shall obtain all land and rights-of-way necessary for carrying out and for the completion of the Work to be performed pursuant to the Contract Documents, unless otherwise mutually agreed.
- 31.2 The Owner shall provide to the Contractor information which delineates and describes the lands owned and rights-of-way acquired.
- 31.3 The Contractor shall provide at his own expense without liability to the Owner any additional land and access thereto that the Contractor may desire for temporary construction facilities, or for storage of materials.

32. GUARANTEE

The Contractor shall guarantee all materials and equipment and work performed for a period of one (1) year after final acceptance by the Owner of all work at both plants. The Contractor warrants and guarantees during the guarantee period that the completed system is free from all defects due to faulty materials or workmanship and the Contractor shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The Owner will give notice of observed defects with reasonable promptness. In the event that the Contractor should fail to make such repairs, adjustments, or other work that may be necessary by such defects, the Owner may do so and charge the Contractor the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guarantee period.

33. ARBITRATION

- 33.1 All claims, disputes and other matters in question arising out of, or relating to, the Contract Documents or the breach thereof, except for claims which have been waived by the making and acceptance of final payment as provided by Section 23, (Acceptance of Final Payment As Release), shall be decided by arbitration, if all parties mutually agree, in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association. This agreement to arbitrate shall be specifically enforceable under the prevailing arbitration law. Any arbitration based on settlements or awards shall include the following information: (a) finding of fact, (b) allocation of award to each issue, (c) conclusion of law, (d) basis of award and rationale. The award rendered by the arbitrators shall be final, and judgement may be entered upon it in any court having jurisdiction thereof.

33.2 Notice of the demand for arbitration shall be filed in writing with the other party to the Contract Documents and with the American Arbitration Association, and a copy shall be filed with the Engineer. Demand for arbitration shall in no event be made on any claim, dispute or other matter in question which would be barred by the applicable statute of limitations.

33.3 The Contractor shall carry on the Work and maintain the progress schedule during any arbitration proceedings, unless otherwise mutually agreed in writing.

#### 34. TAXES

The Contractor shall pay all sales, consumer, use and other similar taxes required by laws of the State where the Work is performed, unless proper forms are acquired and submitted exempting the Contractor from such taxes.

#### 35. USE OF PREMISES AND REMOVAL OF DEBRIS

35.1 The Contractor expressly undertakes at his own expense:

35.1.1 To take every precaution against injuries to persons or damage to property;

35.1.2 To store his apparatus, materials, supplies, and equipment in such orderly fashion at the site of the Work as will not unduly interfere with the progress of his Work or the Work of any other Contractors;

35.1.3 To place upon the Work or any part thereof only such loads as are consistent with the safety of that portion of the Work;

35.1.4 To clean up frequently all refuse, rubbish, scrap materials, and debris caused by his operations, to the end that at all times the site of the Work shall present a neat, orderly and workmanlike appearance;

35.1.5 Before final payment, to remove all surplus material, falsework, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from his operations, and to put the site in a neat, orderly condition;

35.1.6 To effect all cutting, fitting or patching of his Work required to make the same to conform to the plans and specifications and, except with the consent of the Engineer, not to cut or otherwise alter the Work of any other Contractor.

36. QUANTITIES OF ESTIMATES

Whenever the estimated quantities of Work to be done and materials to be furnished on a unit price basis under this contract are shown in any of the documents including the proposal, they are given for use in comparing bids, and the right is expressly reserved, except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by the Owner to complete the Work contemplated by this contract, and such increase or diminution shall in no way vitiate this contract, nor shall any such increase or diminution give cause for claims or liability for damages.

37. CONFLICTING CONDITIONS

Any provision in any of the Contract Documents which may be in conflict or inconsistent with any of the paragraphs in these General Conditions shall be void to the extent of such conflict or inconsistency.

38. NOTICE AND SERVICE THEREOF

Any notice of any Contractor from the Owner relative to any part of this contract shall be in writing and considered delivered and the service thereof completed, when said notice is posted by certified or registered mail, to the said Contractor at his last given address, or delivered in person to said Contractor or his authorized representative on the Work.

39. REQUIRED PROVISIONS DEEMED INSERTED

39.1 Each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and the contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon application of either party, the contract shall forthwith be physically amended to make such insertion or correction.

39.2 The Contractor agrees to abide by all local and state laws or ordinances to the extent that such requirements do not conflict with Federal Laws or regulations.

40. SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION

In order to protect the lives and health of his employees under the contract, the Contractor shall comply with all pertinent provisions of the Contract Work Hours and Safety Standards Act as amended, and the Occupational Safety and Health Act of 1970 as amended, and shall maintain an accurate

record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from Work, arising out of and in the course of employment of Work under the Contract.

The Contractor alone shall be responsible for the safety, efficiency, and adequacy of his plant, appliances, and methods, and for any damage which may result from their failure or their improper construction, maintenance, or operation. He shall provide safety controls for protection of life and health of employees. The Contractor shall comply with all safety regulations of the State Department of Labor.

41. LABOR STANDARDS

The Contractor shall comply with the appropriate prevailing wage rates applicable to this project; they are contained in the Wage Rate Section of these Specifications.

42. INTEREST OF FEDERAL, STATE OR LOCAL OFFICIALS

No federal, state or local official shall be admitted to any share or part of this contract or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

43. OTHER PROHIBITED INTEREST

No official of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept or approve, or to take part in negotiation, making, accepting, or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with the construction of the Project, shall become directly or indirectly interested personally in this contract or in any part hereof. No officer, employee, architect, attorney, engineer or inspector of or for the Owner who is authorized in such capacity and on behalf of the Owner to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the Project, shall become directly or indirectly interested personally in this contract or in any part thereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the Project.

44. EXISTING UTILITIES

44.1 Special precautions shall be taken by the Contractor to avoid damage to existing overhead and underground utilities owned and operated by the Owner or by public or private utility companies.

- 44.2 With particular respect to existing underground utilities, the available information concerning their location has been shown on the Drawings. While it is believed that the locations shown are reasonably correct, neither the Engineer nor the Owner can guarantee the accuracy or adequacy of this information.
- 44.3 Before proceeding with the Work, the Contractor shall confer with all public or private companies, agencies, or departments that own and operate utilities in the vicinity of the construction work. The purpose of the conference or conferences, shall be to notify said companies, agencies, or departments of the proposed construction schedule, verify the location of, and possible interference with, the existing utilities that are shown on the plans, arrange for necessary suspension of service and make arrangements to locate and avoid interference with all utilities (including house connections) that are not shown on the plans. The Engineer and Owner have no objection to the contractor arranging for the said utility companies, agencies, or departments to locate and uncover their own utilities; however, the Contractor shall bear the entire responsibility for locating and avoiding or repairing damage to said existing utilities.
- 44.4 When the Contractor encounters any utilities not shown on the plans or in different location than shown on the plans and in conflict with the Work, he shall immediately notify the Engineer.
- 44.5 It is suggested that the Contractor locate all unknown metallic hazards, namely buried pipe, metals, etc by using a pipe locator. The pipe locator shall immediately precede the trench ditching and all hazard located and marked in such manner as to notify the machine operator of such hazard.
- 44.6 Where existing utilities or appurtenant structures, either underground or aboveground, are encountered, they shall not be displaced or molested unless necessary, and in such case shall be replaced in as good or better condition than found as quickly as possible. The Contractor will make all necessary utility relocations unless otherwise noted Where new water lines, gas lines, or sewers are being installed to replace existing lines, the Contractor shall maintain the existing lines in service until new lines are in service or shall provide temporary utility service to affected customers at his expense.
- 44.7 It is expected that the Contractor will be diligent in his efforts and use every possible means to locate existing utilities. Any claims for unavoidable damage,

based on improper or unknown locations, will be thoroughly examined in the light of the Contractor's efforts to locate the said utilities or obstructions prior to beginning construction.

45. STANDARD SPECIFICATIONS

Where standard specifications, such as those of the American Society for Testing Materials, the American Standards Association, the American Association of State Highway Officials, the Federal Aviation Agency, etc are referred to in the specifications and Contract Documents and on the plans, said references shall be construed to mean the latest amended and/or revised versions of the said standard or tentative specifications.

46. SANITARY FACILITIES

The Contractor shall furnish, install and maintain ample sanitary facilities for the workmen. As the needs arise, enclosed temporary toilets, in sufficient number, shall be placed as directed by the Engineer. Permanent toilets installed under this Contract shall not be used during construction. Drinking water shall be provided from an approved safe source, so piped or transported as to be kept clean and fresh, and served from single service containers of satisfactory types.

47. SUPERVISION OF INSTALLATION

All major equipment and control systems shall be installed under the supervision of a qualified installation Engineer and/or representative furnished by the manufacturer of such equipment or control system.

48. AIR AND WATER POLLUTION CONTROL

The Contractor shall provide all materials, equipment, devices and work required to comply with air and water standards and to accomplish construction of the Project in a manner which will protect, enhance, and retrieve a favorable environment. The Contractor, at all times, shall observe and comply with all federal, state, possession, and local laws, codes, ordinances, and regulations governing air and water pollution control and the Contractor and his surety shall indemnify and save harmless the Owner and all his officers, agents, and servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decrees, whether by himself or his employees. The Contractor shall bear all expense of meeting and maintaining air and water standards, and any accessory features incidental to compliance without additional or direct compensation, except as otherwise specified. The Contractor shall take appropriate actions to minimize situation and soil erosion,

control noise and limit odors during construction. No bypassing of wastewater will occur in conjunction with this contract without prior approval of the State Water Pollution Control Agency, and the United States Environmental Protection Agency.

49. USE OF CHEMICALS

All chemicals used during project construction or furnished for project operations, whether herbicide, pesticide, disinfectant, polymer, reactant, or of such classification, must show approval of either EPA or USDA. Use of all such chemicals shall be in conformance with instructions.

50. DAMAGE TO EXISTING LANDSCAPING, PAVEMENTS, STRUCTURES, SIDEWALKS, CURBS, ETC

The Contractor shall be responsible for replacing all lawns, trees, shrubs, fences, sidewalks, driveways, curbs, ditches, drainage structures, or other improvements both public and private which are damaged in carrying out the Work. Reasonable care shall be taken during construction to avoid damage to vegetation. Ornamental shrubbery and tree branches shall be temporarily tied back, where appropriate, to minimize damage. Trees which receive damage to branches shall be trimmed of those branches to improve appearance of the tree. Tree trunks receiving damage from equipment shall be treated with a tree dressing. Trees removed shall be replaced with trees of a like kind, 5'-6' in height as directed by the Engineer.

GENERAL CONDITIONS

- |     |   |     |  |
|-----|---|-----|--|
| 1.  | Definitions                                 | 17. | Subsurface Conditions                      |
| 2.  | Additional Instructions and Detail Drawings | 18. | Suspension of Work, Termination, and Delay |
| 3.  | Schedules, Reports, and Records             | 19. | Payments to Contractor                     |
| 4.  | Drawings and Specifications                 | 20. | Acceptance of Final Payment as Release     |
| 5.  | Shop Drawings                               | 21. | Insurance                                  |
| 6.  | Materials, Services, and Facilities         | 22. | Contract Security                          |
| 7.  | Inspection and Testing                      | 23. | Assignments                                |
| 8.  | Substitutions                               | 24. | Indemnification                            |
| 9.  | Patents                                     | 25. | Separate Contracts                         |
| 10. | Surveys, Permits, Regulations               | 26. | Subcontracting                             |
| 11. | Protection of Work, Property, Persons       | 27. | Engineer's Authority                       |
| 12. | Supervision by Contractor                   | 28. | Land and Rights-of-Way                     |
| 13. | Changes in the Work                         | 29. | Guaranty                                   |
| 14. | Changes in Contract Price                   | 30. | Arbitration                                |
| 15. | Time for Completion and Liquidated Damages  | 31. | Taxes                                      |
| 16. | Correction of Work                          | 32. | Environmental Requirements                 |

1. DEFINITIONS

1.1 Wherever used in the CONTRACT DOCUMENTS, the following terms shall have the meanings indicated and shall be applicable to both the singular and plural thereof:

1.2 ADDENDA - Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the CONTRACT DOCUMENTS, DRAWINGS and SPECIFICATIONS, by additions, deletions, clarifications, or corrections.

1.3 BID - The offer or proposal of the BIDDER submitted on the prescribed form setting forth the prices for the WORK to be performed.

1.4 BIDDER - Any person, firm, or corporation submitting a BID for the WORK.

1.5 BONDS - Bid, Performance, and Payment Bonds and other instruments of surety, furnished by the CONTRACTOR and the CONTRACTOR'S surety in accordance with the CONTRACT DOCUMENTS.

- 1.6 CHANGE ORDER - A written order to the CONTRACTOR authorizing an addition, deletion, or revision in the WORK within the general scope of the CONTRACT DOCUMENTS, or authorizing an adjustment in the CONTRACT PRICE or CONTRACT TIME.
- 1.7 CONTRACT DOCUMENTS - The contract, including Advertisement For BIDS, Information For BIDDERS, BID, BID BOND, Agreement, Payment BOND, Performance BOND, NOTICE OF AWARD, NOTICE TO PROCEED, CHANGE ORDER, DRAWINGS, SPECIFICATIONS, and ADDENDA.
- 1.8 CONTRACT PRICE - The total monies payable to the CONTRACTOR under the terms and conditions of the CONTRACT DOCUMENTS.
- 1.9 CONTRACT TIME - The number of calendar days stated in the CONTRACT DOCUMENTS for the completion of the WORK.
- 1.10 CONTRACTOR - The person, firm, or corporation with whom the OWNER has executed the Agreement.
- 1.11 DRAWINGS - The parts of the CONTRACT DOCUMENTS which show the characteristics and scope of the WORK to be performed and which have been prepared or approved by the ENGINEER.
- 1.12 ENGINEER - The person, firm, or corporation named as such in the CONTRACT DOCUMENTS.
- 1.13 FIELD ORDER - A written order effecting a change in the WORK not involving an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME; issued by the ENGINEER to the CONTRACTOR during construction.
- 1.14 NOTICE OF AWARD - The written notice of the acceptance of the BID from the OWNER to the successful BIDDER.
- 1.15 NOTICE TO PROCEED - Written communication issued by the OWNER to the CONTRACTOR authorizing him/her to proceed with the WORK and establishing the date for commencement of the WORK.
- 1.16 OWNER - A public or quasi-public body or authority, corporation, association, partnership, or an individual for whom the WORK is to be performed.
- 1.17 PROJECT - The undertaking to be performed as provided in the CONTRACT DOCUMENTS.
- 1.18 RESIDENT PROJECT REPRESENTATIVE - The authorized representative of the OWNER who is assigned to the PROJECT site or any part thereof.

1.19 SHOP DRAWINGS - All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the CONTRACTOR, a SUBCONTRACTOR, manufacturer, SUPPLIER or distributor, which illustrate how specific portions of the WORK shall be fabricated or installed.

1.20 SPECIFICATIONS - A part of the CONTRACT DOCUMENTS consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.

1.21 SUBCONTRACTOR - An individual, firm, or corporation having a direct contract with CONTRACTOR or with any other SUBCONTRACTOR for the performance of a part of the WORK at the site.

1.22 SUBSTANTIAL COMPLETION - That date certified by the ENGINEER when the construction of the PROJECT or a specified part thereof is sufficiently completed, in accordance with the CONTRACT DOCUMENTS, so that the PROJECT or specified part can be utilized for the purposes for which it is intended.

1.23 SUPPLEMENTAL GENERAL CONDITIONS - Modifications to General Conditions required by a Federal agency for participation in the PROJECT and approved by the agency in writing prior to inclusion in the CONTRACT DOCUMENTS, or such requirements that may be imposed by applicable state laws.

1.24 SUPPLIER - Any person or organization who supplies materials or equipment for the WORK, including that fabricated to a special design, but who does not perform labor at the site.

1.25 WORK - All labor necessary to produce the construction required by the CONTRACT DOCUMENTS, and all materials and equipment incorporated or to be incorporated in the PROJECT.

1.26 WRITTEN NOTICE - Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at their last given address, or delivered in person to said party or their authorized representative on the WORK.

## 2. ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS

2.1 The CONTRACTOR may be furnished additional instructions and detail drawings, by the ENGINEER, as necessary to carry out the WORK required by the CONTRACT DOCUMENTS.

2.2 The additional drawings and instructions thus supplied will become a part of the CONTRACT DOCUMENTS. The CONTRACTOR shall carry out the WORK in accordance with the additional detail drawings and instructions.

3. SCHEDULES, REPORTS AND RECORDS

3.1 The CONTRACTOR shall submit to the OWNER such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data where applicable as are required by the CONTRACT DOCUMENTS for the WORK to be performed.

3.2 Prior to the first partial payment estimate the CONTRACTOR shall submit construction progress schedules showing the order in which the CONTRACTOR proposes to carry on the WORK, including dates at which the various parts of the WORK will be started, estimated date of completion of each part and, as applicable:

3.2.1 The dates at which special detail drawings will be required; and

3.2.2 Respective dates for submission of SHOP DRAWINGS, the beginning of manufacture, the testing and the installation of materials, supplies and equipment.

3.3 The CONTRACTOR shall also submit a schedule of payments that the CONTRACTOR anticipates will be earned during the course of the WORK.

4. DRAWINGS AND SPECIFICATIONS

4.1 The intent of the DRAWINGS and SPECIFICATIONS is that the CONTRACTOR shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the WORK in accordance with the CONTRACT DOCUMENTS and all incidental work necessary to complete the PROJECT in an acceptable manner, ready for use, occupancy or operation by the OWNER.

4.2 In case of conflict between the DRAWINGS and SPECIFICATIONS, the SPECIFICATIONS shall govern. Figure dimensions on DRAWINGS shall govern over general DRAWINGS.

4.3 Any discrepancies found between the DRAWINGS and SPECIFICATIONS and site conditions or any inconsistencies or ambiguities in the DRAWINGS or SPECIFICATIONS shall be immediately reported to the ENGINEER, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. WORK done by the CONTRACTOR after discovery of such discrepancies, inconsistencies or ambiguities shall be done at the CONTRACTOR'S risk.

5. SHOP DRAWINGS

5.1 The CONTRACTOR shall provide SHOP DRAWINGS as may be necessary for the prosecution of the WORK as required by the CONTRACT DOCUMENTS. The ENGINEER shall promptly review all SHOP DRAWINGS. The ENGINEER'S approval of any SHOP DRAWING shall not release the CONTRACTOR from responsibility for deviations from the CONTRACT DOCUMENTS. The approval of any SHOP DRAWING which substantially deviates from the requirement of the CONTRACT DOCUMENTS shall be evidenced by a CHANGE ORDER.

5.2 When submitted for the ENGINEER'S review, SHOP DRAWINGS shall bear the CONTRACTOR'S certification that he has reviewed, checked and approved the SHOP DRAWINGS and that they are in conformance with the requirements of the CONTRACT DOCUMENTS.

5.3 Portions of the WORK requiring a SHOP DRAWING or sample submission shall not begin until the SHOP DRAWING or submission has been approved by the ENGINEER. A copy of each approved SHOP DRAWING and each approved sample shall be kept in good order by the CONTRACTOR at the site and shall be available to the ENGINEER.

#### 6. MATERIALS, SERVICES AND FACILITIES

6.1 It is understood that, except as otherwise specifically stated in the CONTRACT DOCUMENTS, the CONTRACTOR shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete, and deliver the WORK within the specified time.

6.2 Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the WORK. Stored materials and equipment to be incorporated in the WORK shall be located so as to facilitate prompt inspection.

6.3 Manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.

6.4 Materials, supplies, and equipment shall be in accordance with samples submitted by the CONTRACTOR and approved by the ENGINEER.

6.5 Materials, supplies, or equipment to be incorporated into the WORK shall not be purchased by the CONTRACTOR or the SUBCONTRACTOR subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

7. INSPECTION AND TESTING

7.1 All materials and equipment used in the construction of the PROJECT shall be subject to adequate inspection and testing in accordance with generally accepted standards, as required and defined in the CONTRACT DOCUMENTS.

7.2 The OWNER shall provide all inspection and testing services not required by the CONTRACT DOCUMENTS.

7.3 The CONTRACTOR shall provide at the CONTRACTOR'S expense the testing and inspection services required by the CONTRACT DOCUMENTS.

7.4 If the CONTRACT DOCUMENTS, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any WORK to specifically be inspected, tested, or approved by someone other than the CONTRACTOR, the CONTRACTOR will give the ENGINEER timely notice of readiness. The CONTRACTOR will then furnish the ENGINEER the required certificates of inspection, testing or approval.

7.5 Inspections, tests, or approvals by the engineer or others shall not relieve the CONTRACTOR from the obligations to perform the WORK in accordance with the requirements of the CONTRACT DOCUMENTS.

7.6 The ENGINEER and the ENGINEER'S representatives will at all times have access to the WORK. In addition, authorized representatives and agents of any participating Federal or State agency shall be permitted to inspect all work, materials, payrolls, records or personnel, invoices of materials, and other relevant data and records. The CONTRACTOR will provide proper facilities for such access and observation of the WORK and also for any inspection or testing thereof.

7.7 If any WORK is covered contrary to the written instructions of the ENGINEER it must, if requested by the ENGINEER, be uncovered for the ENGINEER'S observation and replaced at the CONTRACTOR'S expense.

7.8 If the ENGINEER considers it necessary or advisable that covered WORK be inspected or tested by others, the CONTRACTOR, at the ENGINEER'S request, will uncover, expose or otherwise make available for observation, inspection or testing as the ENGINEER may require, that portion of the WORK in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such WORK is defective, the CONTRACTOR will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, if, however, such WORK is not found to be defective, the CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate CHANGE ORDER shall be issued.

### 3. SUBSTITUTIONS

3.1 Whenever a material, article, or piece of equipment is identified on the DRAWINGS or SPECIFICATIONS by reference to brand name or catalogue numbers, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and function shall be considered. The CONTRACTOR may recommend the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the CONTRACT DOCUMENTS by reference to brand name or catalogue number, and if, in the opinion of the ENGINEER, such material, article, or piece of equipment is of equal substance and function to that specified, the ENGINEER may approve its substitution and use by the CONTRACTOR. Any cost differential shall be deductible from the CONTRACT PRICE and the CONTRACT DOCUMENTS shall be appropriately modified by CHANGE ORDER. The CONTRACTOR warrants that if substitutes are approved, no major changes in the function or general design of the PROJECT will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the CONTRACTOR without a change in the CONTRACT PRICE or CONTRACT TIME.

### 9. PATENTS

9.1 The CONTRACTOR shall pay all applicable royalties and license fees, and shall defend all suits or claims for infringement of any patent rights and save the OWNER harmless from loss on account thereof, except that the OWNER shall be responsible for any such loss when a particular process, design, or product of a particular manufacturer or manufacturers is specified, however, if the CONTRACTOR has reason to believe that the design, process or product specified is an infringement of a patent, the CONTRACTOR shall be responsible for such loss unless the CONTRACTOR promptly gives such information to the ENGINEER.

10. SURVEYS, PERMITS, REGULATIONS

10.1 The OWNER shall furnish all boundary surveys and establish all base lines for locating the principal component parts of the WORK together with a suitable number of bench marks adjacent to the WORK as shown in the CONTRACT DOCUMENTS. From the information provided by the OWNER, unless otherwise specified in the CONTRACT DOCUMENTS, the CONTRACTOR shall develop and make all detail surveys needed for construction such as slope stakes, batter boards, stakes for pipe locations and other working points, lines, elevations and cut sheets.

10.2 The CONTRACTOR shall carefully preserve bench marks, reference points and stakes and, in case of willful or careless destruction, shall be charged with the resulting expense and shall be responsible for any mistake that may be caused by their unnecessary loss or disturbance.

10.3 Permits and licenses of a temporary nature necessary for the prosecution of the WORK shall be secured and paid for by the CONTRACTOR unless otherwise stated in the SUPPLEMENTAL GENERAL CONDITIONS. Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the OWNER, unless otherwise specified. The CONTRACTOR shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the WORK as drawn and specified. If the CONTRACTOR observes that the CONTRACT DOCUMENTS are at variance therewith, the CONTRACTOR shall promptly notify the ENGINEER in writing, and any necessary changes shall be adjusted as provided in Section 13, CHANGES IN THE WORK.

11. PROTECTION OF WORK, PROPERTY, AND PERSONS

11.1 The CONTRACTOR will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the WORK. The CONTRACTOR will take all necessary precautions for the safety of, will provide the necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the WORK and other persons who may be affected thereby, all the WORK and all materials or equipment to be incorporated therein, whether in storage on or off the site, the Owner property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

11.2 The CONTRACTOR will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. The CONTRACTOR will erect and maintain, as required by the conditions and progress of the WORK, all necessary safeguards for safety and protection. The CONTRACTOR will notify owners of adjacent utilities when prosecution of the WORK may affect them. The CONTRACTOR will remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or part, by the CONTRACTOR, any SUBCONTRACTOR or anyone directly or indirectly employed by any of them or anyone directly or indirectly employed by any of them or anyone of whose acts any of them be liable, except damage or loss attributable to the fault of the CONTRACT DOCUMENTS or to the acts or omissions of the OWNER, of the ENGINEER or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the CONTRACTOR.

11.3 In emergencies affecting the safety of persons or the WORK or property at the site or adjacent thereto, the CONTRACTOR, without special instructions or authorization from the ENGINEER or OWNER, shall act to prevent threatened damage, injury or loss. The CONTRACTOR will give the ENGINEER prompt WRITTEN NOTICE of any significant changes in the WORK or deviations from the CONTRACT DOCUMENTS caused thereby, and a CHANGE ORDER shall thereupon be issued covering the changes and deviations involved.

## 12. SUPERVISION BY CONTRACTOR

12.1 The CONTRACTOR will supervise and direct the WORK. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The CONTRACTOR will employ and maintain on the WORK a qualified supervisor or superintendent who shall have been designated in writing by the CONTRACTOR as the CONTRACTOR'S representative at the site. The supervisor shall have full authority to act on behalf of the CONTRACTOR and all communications given to the supervisor shall be as binding as if given to the CONTRACTOR. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the WORK.

## 13. CHANGES IN THE WORK

13.1 The OWNER may at any time, as the need arises, order changes within the scope of the WORK without invalidating the Agreement. If such changes increase or decrease the amount due under the CONTRACT DOCUMENTS, or in the time required for performance of the WORK, an equitable adjustment shall be authorized by CHANGE ORDER.

13.2 The ENGINEER, also, may at any time, by issuing a FIELD ORDER, make changes in the details of the WORK. The CONTRACTOR shall proceed with the performance of any changes in the WORK so ordered by the ENGINEER unless the CONTRACTOR believes that such FIELD ORDER entitles the CONTRACTOR to a change in CONTRACT PRICE or TIME, or both, in which event the CONTRACTOR shall give the ENGINEER WRITTEN NOTICE thereof within seven (7) days after the receipt of the ordered change. Thereafter the CONTRACTOR shall document the basis for the change in CONTRACT PRICE or TIME within thirty (30) days. The CONTRACTOR shall not execute such changes pending the receipt of an executed CHANGE ORDER or further instruction from the OWNER.

#### 14. CHANGES IN CONTRACT PRICE

14.1 The CONTRACT PRICE may be changed only by a CHANGE ORDER. The value of any WORK covered by a CHANGE ORDER or of any claim for increase or decrease in the CONTRACT PRICE shall be determined by one or more of the following methods in the order of precedence listed below:

- a. Unit prices previously approved.
- b. An agreed lump sum.

#### 15. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

15.1 The date of beginning and the time for completion of the WORK are essential conditions of the CONTRACT DOCUMENTS and the WORK embraced shall be commenced on a date specified in the NOTICE TO PROCEED.

15.2 The CONTRACTOR will proceed with the WORK at such rate of progress to insure full completion within the CONTRACT TIME. It is expressly understood and agreed, by and between the CONTRACTOR and the OWNER, that the CONTRACT TIME for the completion of the WORK described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the WORK.

15.3 If the CONTRACTOR shall fail to complete the WORK within the CONTRACT TIME, or extension of time granted by the OWNER, then the CONTRACTOR will pay to the OWNER the amount for liquidated damages as specified in the BID for each calendar day that the CONTRACTOR shall be in default after the time stipulated in the CONTRACT DOCUMENTS.

15.4 The CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in completion of the WORK is due to the following and the CONTRACTOR has promptly given WRITTEN NOTICE of such delay to the OWNER or ENGINEER.

15.4.1 To any preference, priority or allocation order duly issued by the OWNER.

15.4.2 To unforeseeable causes beyond the control and without the fault or negligence of the CONTRACTOR, including but not restricted to, acts of God, or of the public enemy, acts of the OWNER, acts of another CONTRACTOR in the performance of a contract with the OWNER, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather; and

15.4.3 To any delays of SUBCONTRACTORS occasioned by any of the causes specified in paragraphs 15.4.1 and 15.4.2 of this article.

#### 16. CORRECTION OF WORK

16.1 The CONTRACTOR shall promptly remove from the premises all WORK rejected by the ENGINEER for failure to comply with the CONTRACT DOCUMENTS, whether incorporated in the construction or not, and the CONTRACTOR shall promptly replace and reexecute the WORK in accordance with the CONTRACT DOCUMENTS and without expense to the OWNER and shall bear the expense of making good all WORK of other CONTRACTORS destroyed or damaged by such removal or replacement.

16.2 All removal and replacement WORK shall be done at the CONTRACTOR'S expense. If the CONTRACTOR does not take action to remove such rejected WORK within ten (10) days after receipt of WRITTEN NOTICE, the OWNER may remove such WORK and store the materials at the expense of the CONTRACTOR.

#### 17. SUBSURFACE CONDITIONS

17.1 The CONTRACTOR shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the OWNER by WRITTEN NOTICE of:

17.1.1 Subsurface or latent physical conditions at the site differing materially from those indicated in the CONTRACT DOCUMENTS; or

17.1.2 Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in WORK of the character provided for in the CONTRACT DOCUMENTS.

17.2 The OWNER shall promptly investigate the conditions, and if it is found that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the WORK, an equitable adjustment shall be made and the CONTRACT DOCUMENTS shall be modified by a CHANGE ORDER. Any claim of the CONTRACTOR for adjustment hereunder shall not be allowed unless the required WRITTEN NOTICE has been given; provided that the OWNER may, if the OWNER determines the facts so justify, consider and adjust any such claims asserted before the date of final payment.

18. SUSPENSION OF WORK, TERMINATION, AND DELAY

18.1 The OWNER may suspend the WORK or any portion thereof for a period of not more than ninety days or such further time as agreed upon by the CONTRACTOR, by WRITTEN NOTICE to the CONTRACTOR and the ENGINEER which shall fix the date on which WORK shall be resumed. The CONTRACTOR will resume that WORK on the date so fixed. The CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to any suspension.

18.2 If the CONTRACTOR is adjudged a bankrupt or insolvent, or makes a general assignment for the benefit of its creditors, or if a trustee or receiver is appointed for the CONTRACTOR or for any of its property, or if CONTRACTOR files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or repeatedly fails to make prompt payments to SUBCONTRACTORS or for labor, materials or equipment or disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the WORK or disregards the authority of the ENGINEER, or otherwise violates any provision of the CONTRACT DOCUMENTS, then the OWNER may, without prejudice to any other right or remedy and after giving the CONTRACTOR and its surety a minimum of ten (10) days from delivery of a WRITTEN NOTICE, terminate the services of the CONTRACTOR and take possession of the PROJECT and of all materials, equipment, tools, construction equipment and machinery thereon owned by the CONTRACTOR, and finish the WORK by whatever method the OWNER may deem expedient. In such case the CONTRACTOR shall not be entitled to receive any further payment until the WORK is finished. If the unpaid balance of the CONTRACT PRICE exceeds the direct and indirect costs of completing the PROJECT, including compensation for additional professional services, such excess SHALL BE PAID TO THE CONTRACTOR. If such costs exceed such unpaid balance, the CONTRACTOR will pay the difference to the OWNER. Such costs incurred by the OWNER will be determined by the ENGINEER and incorporated in a CHANGE ORDER.

18.3 Where the CONTRACTOR'S services have been so terminated by the OWNER, said termination shall not affect any right of the OWNER against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of monies by the OWNER due the CONTRACTOR will not release the CONTRACTOR from compliance with the CONTRACT DOCUMENTS.

18.4 After ten (10) days from delivery of a WRITTEN NOTICE to the CONTRACTOR and the ENGINEER, the OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the PROJECT and terminate the CONTRACT. In such case the CONTRACTOR shall be paid for all WORK executed and any expense sustained plus reasonable profit.

18.5 If, through no act or fault of the CONTRACTOR, the WORK is suspended for a period of more than ninety (90) days by the OWNER or under an order of court or other public authority, or the ENGINEER fails to act on any request for payment within thirty (30) days after it is submitted, or the OWNER fails to pay the CONTRACTOR substantially the sum approved by the ENGINEER or awarded by arbitrators within thirty (30) days of its approval and presentation, then the CONTRACTOR may, after ten (10) days from delivery of a WRITTEN NOTICE to the OWNER and the ENGINEER terminate the CONTRACT and recover from the OWNER payment for all WORK executed and all expenses sustained. In addition and in lieu of terminating the CONTRACT, if the ENGINEER has failed to act on a request for payment or if the OWNER has failed to make any payment as aforesaid, the CONTRACTOR may upon ten (10) days written notice to the OWNER and the ENGINEER stop the WORK until paid all amounts then due, in which event and upon resumption of the WORK CHANGE ORDERS shall be issued for adjusting the CONTRACT PRICE or extending the CONTRACT TIME or both to compensate for the costs and delays attributable to the stoppage of the WORK.

18.6 If the performance of all or any portion of the WORK is suspended, delayed, or interrupted as a result of a failure of the OWNER or ENGINEER to act within the time specified in the CONTRACT DOCUMENTS, or if no time is specified, within a reasonable time, an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, shall be made by CHANGE ORDER to compensate the CONTRACTOR for the costs and delays necessarily caused by the failure of the OWNER or ENGINEER.

19. PAYMENT TO CONTRACTOR

19.1 At least ten (10) days before each progress payment falls due (but not more often than once a month), the CONTRACTOR will submit to the ENGINEER a partial payment estimate filled out and signed by the CONTRACTOR covering the WORK performed during the period covered by the partial payment estimate and supported by such data as the ENGINEER may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the WORK but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the OWNER, as will establish the OWNER'S title to the material and equipment and protect the OWNER'S interest therein, including applicable insurance. The ENGINEER will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing approval of payment, and present the partial payment estimate to the OWNER, or return the partial payment estimate to the CONTRACTOR indicating in writing the reasons for refusing to approve payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the partial payment estimate. The OWNER will, within ten (10) days of presentation of an approved partial payment estimate, pay the CONTRACTOR a progress payment on the basis of the approved partial payment estimate less the retainage. The retainage shall be an amount equal to 5% of said estimate. If at any time thereafter when the progress of the WORK is not satisfactory, additional amounts may be retained. Upon substantial completion of the work, any amount retained may be paid to the CONTRACTOR. When the WORK has been substantially completed except for WORK which cannot be completed because of weather conditions, lack of materials or other reasons which in the judgment of the OWNER are valid reasons for noncompletion, the OWNER may make additional payments, retaining at all times an amount sufficient to cover the estimated cost of the WORK still to be completed.

19.2 The request for payment may also include an allowance for the cost of such major materials and equipment which are suitably stored either at or near the site.

19.3 Prior to SUBSTANTIAL COMPLETION, the OWNER, with the approval of the ENGINEER and with the concurrence of the CONTRACTOR, may use any completed or substantially completed portions of the WORK. Such use shall not constitute an acceptance of such portions of the WORK.

19.4 The OWNER shall have the right to enter the premises for the purpose of doing work not covered by the CONTRACT DOCUMENTS. This provision shall not be construed as relieving the CONTRACTOR of the sole responsibility for the care and protection of the WORK, or the restoration of any damaged WORK except such as may be caused by agents or employees of the OWNER.

19.5 Upon completion and acceptance of the WORK, the ENGINEER shall issue a certificate attached to the final payment request that the WORK has been accepted under the conditions of the CONTRACT DOCUMENTS. The entire balance found to be due the CONTRACTOR, including the retained percentages, but except such sums as may be lawfully retained by the OWNER, shall be paid to the CONTRACTOR within thirty (30) days of completion and acceptance of the WORK.

19.6 The CONTRACTOR will indemnify and save the OWNER or the OWNER'S agents harmless from all claims growing out of the lawful demand of SUBCONTRACTORS, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the WORK. The CONTRACTOR shall, at the OWNER'S request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the CONTRACTOR fails to do so the OWNER may, after having notified the CONTRACTOR, either pay unpaid bills or withhold from the CONTRACTOR'S unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the CONTRACTOR shall be resumed in accordance with the terms of the CONTRACT DOCUMENTS, but in no event shall the provisions of this sentence be construed to impose any obligations upon the OWNER to either the CONTRACTOR, the CONTRACTOR'S Surety, or any third party. In paying any unpaid bills of the CONTRACTOR, any payment so made by the OWNER shall be considered as a payment made under the CONTRACT DOCUMENTS by the OWNER to the CONTRACTOR and the OWNER shall not be liable to the CONTRACTOR for any such payments made in good faith.

19.7 If the OWNER fails to make payment thirty (30) days after approval by the ENGINEER, in addition to other remedies available to the CONTRACTOR, there shall be added to each such payment interest at the maximum legal rate commencing on the first day after said payment is due and continuing until the payment is received by the CONTRACTOR.

#### 20. ACCEPTANCE OF FINAL PAYMENT AS RELEASE

20.1 The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the OWNER of all claims and all liability to the CONTRACTOR other than claims in stated amounts as may be specifically excepted by the CONTRACTOR for all things done or furnished in connection with this WORK and for every act and neglect of the OWNER and others relating to or arising out of this WORK. Any payment, however, final or otherwise, shall not release the CONTRACTOR or its sureties from any obligations under the CONTRACT DOCUMENTS or the Performance and Payment BONDS.

21. INSURANCE

21.1 The CONTRACTOR shall purchase and maintain such insurance as will protect it from claims set forth below which may arise out of, or result from, the CONTRACTOR'S execution of the WORK, whether such execution be by the CONTRACTOR, any SUBCONTRACTOR, or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

21.1.1 Claims under workmen's compensation, disability benefit and other similar employee benefit acts;

21.1.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of employees;

21.1.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than employees;

21.1.4 Claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the CONTRACTOR, or (2) by any other person; and

21.1.5 Claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom.

21.2 Certificates of Insurance acceptable to the OWNER shall be filed with the OWNER prior to commencement of the WORK. These Certificates shall contain a provision that coverages afforded under the policies will not be canceled unless at least fifteen (15) days prior WRITTEN NOTICE has been given to the OWNER.

21.3 The CONTRACTOR shall procure and maintain, at the CONTRACTOR'S own expense, during the CONTRACT TIME, Liability insurance as hereinafter specified:

21.3.1 CONTRACTOR'S General Public Liability and Property Damage Insurance including vehicle coverage issued to the CONTRACTOR and protecting the CONTRACTOR from all claims for personal injury, including death, and all claims for destruction of or damage to property, arising out of or in connection with any operations under the CONTRACT DOCUMENTS, whether such operations be by the CONTRACTOR or by any SUBCONTRACTOR employed by the CONTRACTOR or anyone directly or indirectly employed by the CONTRACTOR or by a SUBCONTRACTOR employed by the CONTRACTOR. Insurance shall be written with a limit of liability of not less than \$500,000 for all damages arising out of bodily injury, including death, at any time resulting therefrom, sustained by any one person in any one accident; and a limit of liability of not less than \$500,000 aggregate for any such damages sustained by two or more persons in any one accident. Insurance shall be written with a limit of liability of not less than \$200,000 for all property damage sustained by any one person in any one accident; and a limit of liability of not less than \$200,000 aggregate for any such damage sustained by two or more persons in any one accident.

21.3.2 The CONTRACTOR shall acquire and maintain, if applicable, Fire and Extended Coverage insurance upon the PROJECT to the full insurable value thereof for the benefit of the OWNER, the CONTRACTOR, and SUBCONTRACTORS as their interest may appear. This provision shall in no way release the CONTRACTOR or CONTRACTOR'S surety from obligations under the CONTRACT DOCUMENTS to fully complete the PROJECT.

21.4 The CONTRACTOR shall procure and maintain, at the CONTRACTOR'S own expense, during the CONTRACT TIME, in accordance with the provisions of the laws of the state in which the WORK is performed, Workmen's Compensation Insurance, including occupational disease provisions, for all of the CONTRACTOR'S employees at the site of the PROJECT and in case any WORK is sublet, the CONTRACTOR shall require such SUBCONTRACTOR similarly to provide Workmen's Compensation Insurance, including occupational disease provisions for all of the latter's employees unless such employees are covered by the protection afforded by the CONTRACTOR. In case any class of employees engaged in hazardous work under this contract at the site of the PROJECT is not protected under Workmen's Compensation statute, the CONTRACTOR shall provide, and shall cause each SUBCONTRACTOR to provide, adequate and suitable insurance for the protection of its employees not otherwise protected.

21.5 The CONTRACTOR shall secure, if applicable, "All Risk" type Builder's Risk Insurance for WORK to be performed. Unless specifically authorized by the OWNER, the amount of such insurance shall not be less than the CONTRACT PRICE totaled in the BID. The policy shall cover not less than the losses due to fire, explosion, hail, lightning, vandalism, malicious mischief, wind, collapse, riot, aircraft, and smoke during the CONTRACT TIME, and until the WORK is accepted by the OWNER. The policy shall name as the insured the CONTRACTOR, and the OWNER.

## 22. CONTRACT SECURITY

22.1 The CONTRACTOR shall within ten (10) days after the receipt of the NOTICE OF AWARD furnish the OWNER with a Performance BOND and a Payment BOND in penal sums equal to the amount of the CONTRACT PRICE, conditioned upon the performance by the CONTRACTOR of all undertakings, covenants, terms, conditions and agreements of the CONTRACT DOCUMENTS, and upon the prompt payment by the CONTRACTOR to all persons supplying labor and materials in the prosecution of the WORK provided by the CONTRACT DOCUMENTS. Such BONDS shall be executed by the CONTRACTOR and a corporate bonding company licensed to transact such business in the state in which the WORK is to be performed and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. The expense of these BONDS shall be borne by the CONTRACTOR. If at any time a surety on any such BOND is declared a bankrupt or loses its right to do business in the state in which the WORK is to be performed or is removed from the list of Surety Companies accepted on Federal Bonds, CONTRACTOR shall within ten (10) days after notice from the OWNER to do so, substitute an acceptable BOND (or BONDS) in such form and sum and signed by such other surety or sureties as may be satisfactory to the OWNER. The premiums on such BOND shall be paid by the CONTRACTOR. No further payment shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable BOND to the OWNER.

## 23. ASSIGNMENTS

23.1 Neither the CONTRACTOR nor the OWNER shall sell, transfer, assign, or otherwise dispose of the Contract or any portion thereof, or of any right, title or interest therein, or any obligations thereunder, without written consent of the other party.

## 24. INDEMNIFICATION

24.1 The CONTRACTOR will indemnify and hold harmless the OWNER and the ENGINEER and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the WORK, provided that any such claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom; and is caused in whole or in part by any negligent or willful act or omission of the CONTRACTOR, and SUBCONTRACTOR, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

24.2 In any and all claims against the OWNER or the ENGINEER, or any of their agents or employees, by any employee of the CONTRACTOR, any SUBCONTRACTOR, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or any SUBCONTRACTOR under workmen's compensation acts, disability benefit acts or other employee benefits acts.

24.3 The obligation of the CONTRACTOR under this paragraph shall not extend to the liability of the ENGINEER, its agents or employees arising out of the preparation or approval of maps, DRAWINGS, opinions, reports, surveys, CHANGE ORDERS, designs or SPECIFICATIONS.

#### 25. SEPARATE CONTRACTS

25.1 The OWNER reserves the right to let other contracts in connection with this PROJECT. The CONTRACTOR shall afford other CONTRACTORS reasonable opportunity for the introduction and storage of their materials and the execution of their WORK, and shall properly connect and coordinate the WORK with theirs. If the proper execution or results of any part of the CONTRACTOR'S WORK depends upon the WORK of any other CONTRACTOR, the CONTRACTOR shall inspect and promptly report to the ENGINEER any defects in such WORK that render it unsuitable for such proper execution and results.

25.2 The OWNER may perform additional WORK related to the PROJECT or the OWNER may let other contracts containing provisions similar to these. The CONTRACTOR will afford the other CONTRACTORS who are parties to such Contracts (or the OWNER, if the OWNER is performing the additional WORK) reasonable opportunity for the introduction and storage of materials and equipment and the execution of WORK, and shall properly connect and coordinate the WORK with theirs.

25.3 If the performance of additional WORK by other CONTRACTORS or the OWNER is not noted in the CONTRACT DOCUMENTS prior to the execution of the CONTRACT, written notice thereof shall be given to the CONTRACTOR prior to starting any such additional WORK. If the CONTRACTOR believes that the performance of such additional WORK by the OWNER or others involves it in additional expense or entitles it to an extension of the CONTRACT TIME, the CONTRACTOR may make a claim thereof as provided in Sections 14 and 15.

#### 26. SUBCONTRACTING

26.1 The CONTRACTOR may utilize the services of specialty SUBCONTRACTS on those parts of the WORK which, under normal contracting practices, are performed by specialty SUBCONTRACTORS.

26.2 The CONTRACTOR shall not award WORK to SUBCONTRACTOR(s), in excess of fifty (50%) percent of the CONTRACT PRICE, without prior written approval of the OWNER.

26.3 The CONTRACTOR shall be fully responsible to the OWNER for the acts and omissions of its SUBCONTRACTORS, and of persons either directly or indirectly employed by them, as the CONTRACTOR is for the acts and omissions of persons directly employed by the CONTRACTOR.

26.4 The CONTRACTOR shall cause appropriate provisions to be inserted in all subcontracts relative to the WORK to bind SUBCONTRACTORS to the CONTRACTOR by the terms of the CONTRACT DOCUMENTS insofar as applicable to the WORK of SUBCONTRACTORS and to give the CONTRACTOR the same power as regards terminating any subcontract that the OWNER may exercise over the CONTRACTOR under any provision of the CONTRACT DOCUMENTS.

26.5 Nothing contained in this CONTRACT shall create any contractual relationship between any SUBCONTRACTOR and the OWNER.

#### 27. ENGINEER'S AUTHORITY

27.1 The ENGINEER shall act as the OWNER'S representative during the construction period, shall decide questions which may arise as to quality and acceptability of materials furnished and WORK performed, and shall interpret the intent of the CONTRACT DOCUMENTS in a fair and unbiased manner. The ENGINEER will make visits to the site and determine if the WORK is proceeding in accordance with the CONTRACT DOCUMENTS.

27.2 The CONTRACTOR will be held strictly to the intent of the CONTRACT DOCUMENTS in regard to the quality of materials, workmanship, and execution of the WORK. Inspections may be made at the factory or fabrication plant of the source of material supply.

27.3 The ENGINEER will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.

27.4 The ENGINEER shall promptly make decisions relative to interpretation of the CONTRACT DOCUMENTS.

#### 28. LAND AND RIGHTS-OF-WAY

28.1 Prior to issuance of NOTICE TO PROCEED, the OWNER shall obtain all land and rights-of-way necessary for carrying out and for the completion of the WORK to be performed pursuant to the CONTRACT DOCUMENTS, unless otherwise mutually agreed.

28.2 The OWNER shall provide to the CONTRACTOR information which delineates and describes the lands owned and rights-of-way acquired.

28.3 The CONTRACTOR shall provide at its own expense and without liability to the OWNER any additional land and access thereto that the CONTRACTOR may desire for temporary construction facilities, or for storage of materials.

29. GUARANTEE

29.1 The CONTRACTOR shall guarantee all materials and equipment furnished and WORK performed for a period of one (1) year from the date of SUBSTANTIAL COMPLETION. The CONTRACTOR warrants and guarantees for a period of one (1) year from the date of SUBSTANTIAL COMPLETION of the system that the completed system is free from all defects due to faulty materials or workmanship and the CONTRACTOR shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The OWNER will give notice of observed defects with reasonable promptness. In the event that the CONTRACTOR should fail to make such repairs, adjustments, or other WORK that may be made necessary by such defects, the OWNER may do so and charge the CONTRACTOR the cost thereby incurred. The Performance BOND shall remain in full force and effect through the guarantee period.

30. ARBITRATION BY MUTUAL AGREEMENT

30.1 All claims, disputes, and other matters in question arising out of, or relating to, the CONTRACT DOCUMENTS or the breach thereof, except for claims which have been waived by making an acceptance of final payment as provided by Section 20, may be decided by arbitration if the parties mutually agree. Any agreement to arbitrate shall be specifically enforceable under the prevailing arbitration law. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in any court having jurisdiction thereof.

30.2 Notice of the request for arbitration shall be filed in writing with the other party to the CONTRACT DOCUMENTS and a copy shall be filed with the ENGINEER. Request for arbitration shall in no event be made on any claim, dispute, or other matter in question which would be barred by the applicable statute of limitations.

30.3 The CONTRACTOR will carry on the WORK and maintain the progress schedule during any arbitration proceedings, unless otherwise mutually agreed in writing.

31. TAXES

31.1 The CONTRACTOR will pay all sales, consumer, use, and other similar taxes required by the laws of the place where the WORK is performed.

32. ENVIRONMENTAL REQUIREMENTS

The CONTRACTOR, when constructing a project involving trenching and/or other related earth excavation, shall comply with the following environmental constraints.

32.1 WETLANDS - The CONTRACTOR, when disposing of excess, spoil, or other construction materials on public or private property, WILL NOT FILL IN or otherwise CONVERT WETLANDS.

32.2 FLOODPLAINS - The CONTRACTOR, when disposing of excess, spoil, or other construction materials on public or private property, WILL NOT FILL IN or otherwise CONVERT 100 YEAR FLOODPLAIN areas delineated on the latest FEMA Floodplain Maps.

32.3 HISTORIC PRESERVATION - Any excavation by the Contractor that uncovers an historical or archaeological artifact shall be immediately reported to the PROJECT ENGINEER and a representative of RUS. Construction shall be temporarily halted pending the notification process and further directions issued by RUS after consultation with the State Historic Preservation Officer (SHPO).

32.4 ENDANGERED SPECIES - The CONTRACTOR shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of the CONTRACTOR, the CONTRACTOR will immediately report this evidence to the PROJECT ENGINEER and a representative of RUS. Construction shall be temporarily halted pending the notification process and further directions issued by RUS after consultation with the U.S. Fish and Wildlife Service.

## RUS Supplemental General Conditions

The provisions of the Rural Utilities Service (RUS) Supplemental General Conditions as described herein change, amend, or supplement the General Conditions and shall supersede any conflicting provisions of this CONTRACT. All provisions of the General Conditions which are not changed, amended, or supplemented, remain in full force:

- |                                     |   |
|-------------------------------------|---|
| 1. CONTRACT APPROVAL                | 9. SMALL, MINORITY AND WOMEN'S BUSINESSES |
| 2. CONTRACT CHANGE ORDERS           | 10. ANTI-KICKBACK                         |
| 3. PARTIAL PAYMENT ESTIMATES        | 11. VIOLATING FACILITIES                  |
| 4. CONFLICT OF INTEREST             | 12. STATE ENERGY POLICY                   |
| 5. PROTECTION OF LIVES AND PROPERTY | 13. EQUAL OPPORTUNITY REQUIREMENTS        |
| 6. REMEDIES                         | 14. CERTIFICATE OF OWNER'S ATTORNEY       |
| 7. GRATUITIES                       | 15. RUS CONCURRENCE                       |
| 8. AUDIT AND ACCESS TO RECORDS      |   |

1. Contract Approval.

1.1 The OWNER and the CONTRACTOR will furnish the OWNER'S Attorney such evidence as required so that the OWNER'S Attorney can complete and execute "Certificate of Owner's Attorney" (Section 14) before the OWNER submits the executed Contract Documents to RUS for approval.

1.2 Concurrence by the State Program Official or designee in the award of the CONTRACT is required before it is effective and the "RUS Concurrence" (Section 15), shall be attached and made a part of the Agreement.

1.3 Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located. [Revision 1, 07/11/1997]

1.4 This CONTRACT is expected to be funded in part with funds from the RUS. Neither the United States nor any of its departments, agencies, or employees is or will be a party to this CONTRACT or any SUBCONTRACT.

2. Contract Change Orders.

2.1 All changes affecting the project's construction cost or modifications of the terms or conditions of the contract must be authorized by means of a written contract change order which is mutually agreed to by the OWNER and CONTRACTOR and is approved by RUS. The contract change order will include extra work, work for which quantities have been altered from those shown in the bidding schedule, as well as decreases or increases in the quantities of installed units which are different than those shown in the bidding schedule because of final measurements. All changes must be recorded on a contract change order before they can be included in a partial payment estimate.

2.2 FORM RD 1924-7, "Contract Change Order" or similar form approved by RUS shall be used to record CONTRACT changes.

2.3 When the CONTRACT sum is, in whole or in part, based on unit prices, the OWNER reserves the right to increase or decrease a unit price quantity as may be deemed reasonable or necessary in order to complete the work contemplated by this CONTRACT.

3. Partial Payment Estimates.

3.1 FORM RD 1924-18, "Partial Payment Estimate," or similar form approved by RUS shall be used when estimating periodic payments due the CONTRACTOR.

3.2 The OWNER may after consultation with the ARCHITECT/ENGINEER withhold or, on account of subsequently discovered evidence, nullify the whole or part of any approved partial payment estimate to such extent as may be necessary to protect the OWNER from loss on account of:

3.2.1 Defective work not remedied.

3.2.2 Claims filed.

3.2.3 Failure of CONTRACTOR to make payments properly to subcontractors or suppliers.

3.2.4 A reasonable doubt that the WORK can be completed for the balance then unpaid.

3.2.5 Damage to another CONTRACTOR.

3.2.6 Performance of WORK in violation of the terms of the CONTRACT DOCUMENTS.

3.3 Where WORK on unit price items is substantially complete but lacks testing, clean-up and/or corrections, amounts shall be deducted from unit prices in partial payment estimates to amply cover such testing, clean-up and/or corrections.

3.4 When the items in 3.2 and 3.3 are cured, payment shall be made for amounts withheld because of them.

3.5 Payments will not be made that would deplete the retainage nor place in escrow any funds that are required for retainage nor invest the retainage for the benefit of the CONTRACTOR.

4. Conflict of Interest.

4.1. Unacceptable bidders. An ENGINEER (individual or firm including persons they employ) who has prepared plans and specifications will not be considered an acceptable bidder. Any firm or corporation in which such ENGINEER (including persons they employ) is an officer, employee, or holds or controls a substantial interest will not be considered an acceptable bidder. Contracts or purchases by the CONTRACTOR shall not be awarded or made to a supplier or manufacturer if the ENGINEER (firm or individual) who prepared the plans and specifications has a corporate or financial affiliation with the supplier or manufacturer. Bids will not be awarded to firms or corporations which are owned or controlled wholly or in part by a member of the governing body of the OWNER or to an individual who is such a member.

4.2. The OWNER'S officers, employees, or agents shall not engage in the award or administration of this CONTRACT if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when: (a) the employee, officer or agent; (b) any member of their immediate family; (c) their partner or (d) an organization which employs, or is about to employ, any of the above has financial or other interest in the CONTRACTOR. The OWNER'S officers, employees, or agents shall neither solicit nor accept gratuities, favors or anything of monetary value from the CONTRACTOR or subcontractor.

5. Protection of Lives and Property

5.1 In order to protect the lives and health of its employees under the CONTRACT, the CONTRACTOR shall comply with all pertinent provisions of the Occupational Safety and Health Administration (OSHA) and any State Safety and Health agency requirements.

5.2 The CONTRACTOR alone shall be responsible for the safety, efficiency, and adequacy of its plant, appliances, and methods, and for any damage which may result from their failure or their improper construction, maintenance or operation.

6. Remedies. Unless otherwise provided in this CONTRACT, all claims, counterclaims, disputes, and other matters in question between the OWNER and the CONTRACTOR arising out of or relating to this CONTRACT or the breach thereof will be decided by arbitration if the parties mutually agree, or in a court of competent jurisdiction within the State in which the OWNER is located.

6.1 The arbitration provisions of this section may be initiated by either party to this CONTRACT by filing with the other party and the ENGINEER a WRITTEN REQUEST for arbitration.

6.2 Each party to this CONTRACT will appoint one arbitrator; the two arbitrators will select a third arbitrator.

6.3 The arbitrators will select a hearing location as close to the OWNER'S locale as possible.

6.4 The procedure for conducting the hearings will follow the Construction Industry Arbitration Rules of the American Arbitration Association.

7. Gratuities.

7.1 If the OWNER finds after a notice and hearing that the CONTRACTOR, or any of the CONTRACTOR'S agents or representatives, offered or gave gratuities (in the form of entertainment, gifts, or otherwise) to any official, employee, or agent of the OWNER, the State, or RUS officials in an attempt to secure this CONTRACT or favorable treatment in awarding, amending, or making any determinations related to the performance of this CONTRACT, the OWNER may, by written notice to the CONTRACTOR, terminate this CONTRACT. The OWNER may also pursue other rights and remedies that the law or this CONTRACT provides. However, the existence of the facts on which the OWNER bases such findings shall be an issue and may be reviewed in proceedings under the Remedies clause of this CONTRACT.

7.2 In the event this CONTRACT is terminated as provided in paragraph 7.1 the OWNER may pursue the same remedies against the CONTRACTOR as it could pursue in the event of a breach of the CONTRACT by the CONTRACTOR. As a penalty, in addition to any other damages to which it may be entitled by law, the OWNER may pursue exemplary damages in an amount (as determined by the OWNER) which shall be not less than three nor more than ten times the costs the CONTRACTOR incurs in providing any such gratuities to any such officer or employee.

8. Audit and Access to Records. For all negotiated contracts (except those of \$10,000 or less), the RUS, the Comptroller General, the OWNER or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the CONTRACTOR, which are pertinent to the CONTRACT, for the purpose of making audits, examinations, excerpts and transcriptions. The CONTRACTOR shall maintain all required records for three years after final payment is made and all other pending matters are closed.

9. Small, Minority and Women's Businesses. If the CONTRACTOR intends to let any subcontracts for a portion of the work, the CONTRACTOR shall take affirmative steps to assure that small, minority and women's businesses are used when possible as sources of supplies, equipment, construction, and services.

10. Anti-Kickback. The CONTRACTOR shall comply with the Copeland Anti-Kickback Act (18 USC 874) as supplemented in Department of Labor regulations (29 CFR, Part 3). This act provides that each CONTRACTOR shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public facilities, to give up any part of the compensation to which they are otherwise entitled. The OWNER shall report all suspected or reported violations to RUS.

11. Violating Facilities. Where this CONTRACT exceeds \$100,000 the CONTRACTOR shall comply with all applicable standards, orders or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations 40 CFR Part 15 which prohibit the awarding of non-exempt federal contracts, grants, or loans to facilities included on EPA's list of violating facilities. The CONTRACTOR will report violations to the EPA.

12. State Energy Policy. The CONTRACTOR shall comply with the Energy Policy and Conservation Act (P.L. 94-163). Mandatory standards and policies relating to energy efficiency, contained in the State Energy Conservation Plan, shall be utilized.

13. Equal Opportunity Requirements. For all contracts in excess of \$10,000, the CONTRACTOR shall comply with Executive Order 11246, entitled "Equal Employment Opportunity," as amended by Executive Order 11375, and as supplemented in Department of Labor regulations (41 CFR Part 60).

13.1 If the CONTRACT exceeds \$10,000, the CONTRACTOR will execute Form RD 400-6, "Compliance Statement."

13.2 The CONTRACTOR'S compliance with Executive Order 11246 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the Standard Federal Equal Employment Opportunity Construction Contract Specifications, as set forth in 41 CFR Part 60-4 and its efforts to meet the goals established for the geographical area where the CONTRACT is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the CONTRACT, and in each trade, and the CONTRACTOR shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the CONTRACTOR'S goals shall be a violation of the CONTRACT, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

13.3 The CONTRACTOR shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the CONTRACT resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number; estimated dollar amount of subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the CONTRACT is to be performed.

14. Certificate of Owner's Attorney.

I, the undersigned, \_\_\_\_\_, the duly authorized and acting legal representative of \_\_\_\_\_, do hereby certify as follows .

I have examined the attached contract(s) and performance and payment bond(s) and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements are adequate and have has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions, and provisions thereof.

\_\_\_\_\_  
Date: \_\_\_\_\_

NOTE: Delete phrase "performance and payment bonds" when not applicable.

15. RUS Concurrence.

As lender or insurer of funds to defray the costs of this contract, and without liability for any payments thereunder, the Rural Utilities Service (RUS) hereby concurs in the award of this CONTRACT to

\_\_\_\_\_

U.S. Department of Agriculture  
Rural Utilities Service

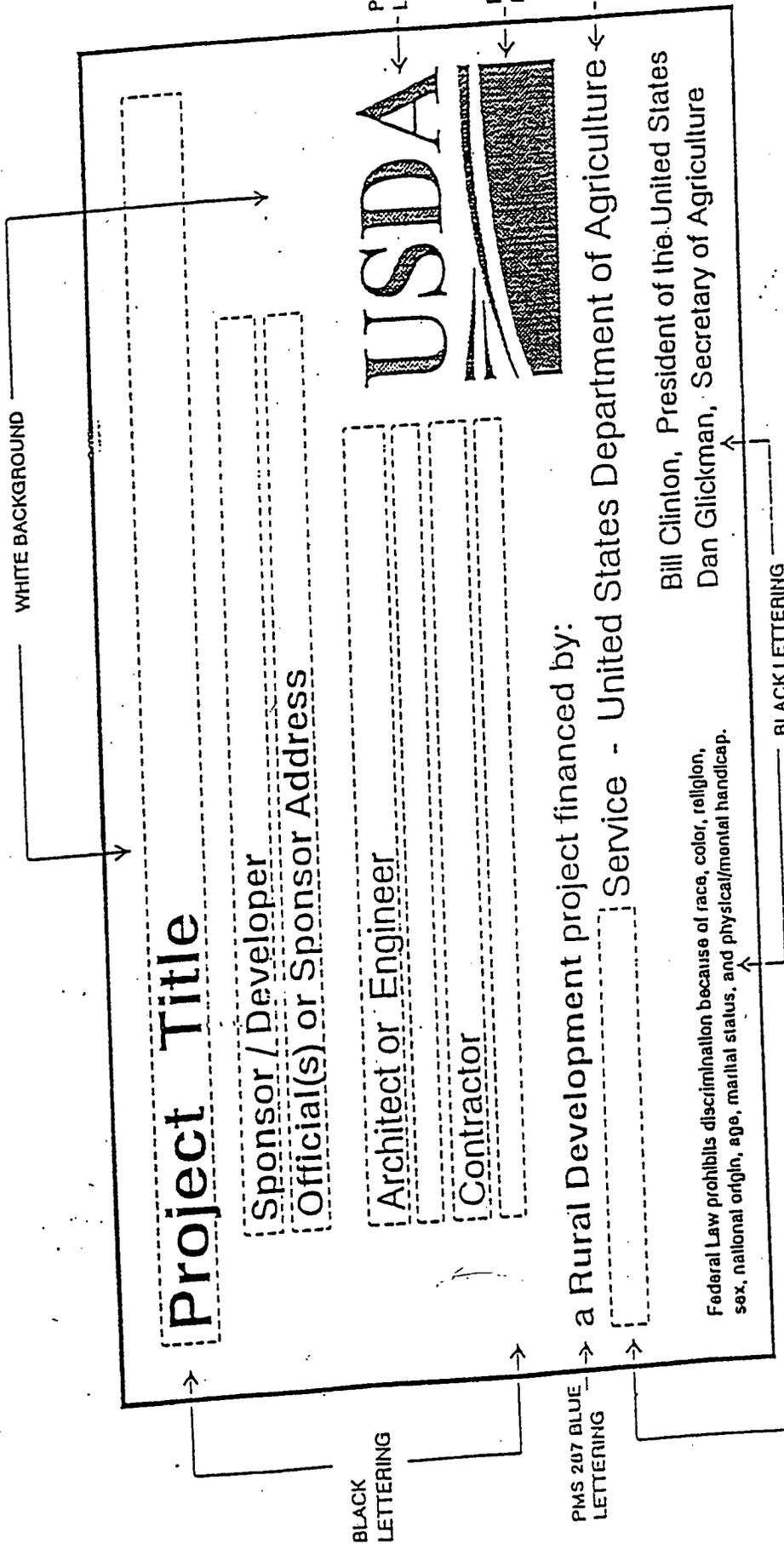
By \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

This CONTRACT shall not be effective unless and until concurred in by the State Program Official of the Rural Utilities Service, U.S. Department of Agriculture or a delegated representative.

construction sign for **RURAL DEVELOPMENT** projects:



SGC-RUS-9

INSERT

"Rural Housing",  
"Rural Utilities", or  
"Rural Business-Cooperative"  
(PMS 343 GREEN)

SIGN DIMENSIONS: 1200mm x 2400mm x 19mm (approx. 4' x 8' x 3/4")  
PLYWOOD PANEL (APA RATED A-B GRADE - EXTERIOR)

PAUL E. PATTON  
GOVERNOR



DIVISION OF EMPLOYMENT STANDARDS,  
APPRENTICESHIP AND TRAINING

JOE NORSWORTHY  
SECRETARY

LABOR CABINET  
1047 U S HWY 127 S STE 4  
FRANKFORT KY 40601-4381

DENNIS J. LANGFORD  
DIRECTOR

August 2, 1999

RECEIVED

AUG 4 1999

LC  
RLB

Haworth, Meyer & Boleyn

Mr. Larry Cann  
Haworth, Meyer & Boleyn, Inc.  
3 HMB Circle  
Frankfort, Kentucky 40601

Re: Grayson County Water District  
Project 11 - Water Line Additions

Advertising Date as Shown on Notification: September, 1999

Dear Mr. Cann:

This office is in receipt of your written notification on the above project as required by KRS 337.510(1).

I am enclosing a copy of the current prevailing wage determination number CR-1-249, dated February 5, 1999, for Grayson County. This schedule of wages shall be attached to and made a part of the specifications for the work, printed on the bidding blanks, and made a part of the contract for the construction of the public works between the public authority and the successful bidder or bidders.

The determination number assigned to this project is based on the date contained in your notification as the date the project is advertised for bids. If this is changed in any way, it will be the responsibility of the public authority to contact this office and reascertain the correct schedule of the prevailing rates of wages.

Your project number is as follows: 085-2-0029-99-1

Respectfully,

Dennis J. Langford  
Director

lprh

Enclosure

TELEPHONE: (502) 564-2784

An Equal Opportunity Employer M/F/D

LR-1

PAUL E. PATTON  
GOVERNOR



DIVISION OF EMPLOYMENT STANDARDS,  
APPRENTICESHIP AND TRAINING

JOE NORSWORTHY  
SECRETARY

LABOR CABINET  
1047 U S HWY 127 S STE 4  
FRANKFORT KY 40601-4381

DENNIS J. LANGFORD  
DIRECTOR

August 2, 1999

RECEIVED

AUG 4 1999

LC  
RFB

Haworth, Meyer & Boleyn

Mr. Larry Cann  
Haworth, Meyer & Boleyn, Inc.  
3 HMB Circle  
Frankfort, Kentucky 40601

Re: Grayson County Water District  
Project 11 - Water Line Additions

Advertising Date as Shown on Notification: September, 1999

Dear Mr. Cann:

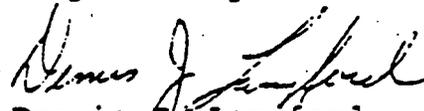
This office is in receipt of your written notification on the above project as required by KRS 337.510(1).

I am enclosing a copy of the current prevailing wage determination number CR-1-249, dated February 5, 1999, for Grayson County. This schedule of wages shall be attached to and made a part of the specifications for the work, printed on the bidding blanks, and made a part of the contract for the construction of the public works between the public authority and the successful bidder or bidders.

The determination number assigned to this project is based on the date contained in your notification as the date the project is advertised for bids. If this is changed in any way, it will be the responsibility of the public authority to contact this office and reascertain the correct schedule of the prevailing rates of wages.

Your project number is as follows: 085-2-0029-99-1

Respectfully,

  
Dennis J. Langford  
Director

lprh

Enclosure

TELEPHONE: (502) 564-2784

An Equal Opportunity Employer M/F/D



COMMISSIONER'S CURRENT REVISION  
KENTUCKY PREVAILING WAGE DETERMINATION  
SENATORIAL DISTRICT 005

**NOTICE**

Determination No. CR-1-249

THIS DETERMINATION APPLIES TO

Date of Determination: February 5, 1999

PROJECT NO. 085-2-0029-99-1

This schedule of the prevailing rate of wages for Senatorial District No. 005, which includes the counties of Breckinridge, Grayson, Hart, Meade and Ohio has been determined in accordance with the provisions of KRS 337.505 to 337.550. This determination shall be referred to as Prevailing Wage Determination No. CR-1-249.

Apprentices or trainees shall be permitted to work as such subject to Administrative Regulations adopted by the Commissioner of Workplace Standards. Copies of these regulations will be furnished upon request to any interested person.

Overtime is to be computed at not less than one and one-half (1 1/2) times the indicated BASE RATE for all hours worked in excess of eight (8) per day, or in excess of forty (40) per week. However, KRS 337.540 permits an employee and employer to agree, in writing, that the employee will be compensated at a straight time base rate for hours worked in excess of eight (8) hours in any one workday, but not more than ten (10) hours worked in any one workday, if such written agreement is prior to the over eight (8) hours in a workday actually being worked, or where provided for in a collective bargaining agreement. The fringe benefit rate is to be paid for each hour worked at a straight time rate for all hours worked.

No laborer, workman or mechanic shall be paid at a rate less than that of the General Laborer except those classified as bona fide apprentices registered with the Kentucky State Apprenticeship Supervisor unless otherwise specified in this schedule of wage rates.

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

<u>CLASSIFICATIONS</u>	<u>RATE AND FRINGE BENEFITS</u>	
ASBESTOS/INSULATION WORKERS	BASE RATE	\$12.59
	FRINGE BENEFITS	2.00
BOILERMAKERS	BASE RATE	\$21.75
	FRINGE BENEFITS	10.76
BRICKLAYERS	*BASE RATE	\$17.28
	FRINGE BENEFITS	4.13

\*Add \$.50 for refractory.

\*Add \$.25 for Layout & Sawmen

CLASSIFICATIONS

RATE AND FRINGE BENEFITS

CARPENTERS:	BUILDING	BASE RATE	\$17.45
		FRINGE BENEFITS	4.67

Carpenters - when working in excess of 30 ft. to 100 ft. above ground or a solid floor on scaffold, skip hoist, tower, or slipform, suspended or swing scaffold, and when working with creosote or other injurious materials.

BUILDING	BASE RATE	\$17.70
	FRINGE BENEFITS	4.67

Carpenters - when working in excess of 100 ft. above ground or solid floor on scaffold, skip hoist, tower or slipform.

BUILDING	BASE RATE	\$17.95
	FRINGE BENEFITS	4.67

Carpenters	HEAVY & HIGHWAY	BASE RATE	\$18.45
		FRINGE BENEFITS	4.93

Divers	HEAVY & HIGHWAY	BASE RATE	\$28.05
		FRINGE BENEFITS	4.93

Piledrivers	BUILDING	BASE RATE	\$17.70
		FRINGE BENEFITS	4.67

HEAVY & HIGHWAY	BASE RATE	\$18.70
	FRINGE BENEFITS	4.93

CEMENT MASONS	BASE RATE	\$ 13.14
---------------	-----------	----------

ELECTRICIANS	BASE RATE	\$22.25
	FRINGE BENEFITS	5.51 +
		3 3/4% gross wages

ELEVATOR CONSTRUCTORS	BASE RATE	\$20.725
	FRINGE BENEFITS	7.37

ELEVATOR CONSTRUCTOR HELPERS	BASE RATE	\$14.51
	FRINGE BENEFITS	7.00



CLASSIFICATIONS

RATE AND FRINGE BENEFITS

LABORERS: (Continued)

Aging and curing of concrete (any mode or method), asbestos abatement worker, asphalt plant laborers, asphalt laborers, batch truck dumpers, carpenter tenders, cement mason tenders, cleaning of machines, concrete laborers, demolition laborers, dredging laborers, drill helper, environmental laborer - nuclear, radiation, toxic and hazardous waste - Level D, flagmen, grade checkers, all hand digging and hand back filling, highway marker placers, landscaping laborers, mesh handlers and placers, puddler, railroad laborers, rip-rap and grouters, right of way laborers, sign, guard rail and fence installers (all types), signal men, sound barrier installer, storm and sanitary sewer laborers, swamper, truck spotters and dumpers, and wrecking of concrete forms.

HEAVY & HIGHWAY	BASE RATE	\$14.97
	FRINGE BENEFITS	4.53

Batter board men (sanitary and storm sewer), brick mason tenders, mortar mixer operator, burner and welder, bushammers, chain saw operator, concrete saw operators, deckhand scow man, dry cement handlers, environmental laborers - nuclear, radiation, toxic and hazardous waste - Level C, forklift operators for masonry, form setters, green concrete cutting, hand operated grouter and grinder machine operator, jack hammers, lead paint abatement, pavement breakers, paving joint machine, pipe layers-laser operators (non-metallic), plastic pipe fusion, power driven georgia buggy or wheelbarrow, power post hole diggers, precast manhole setters, walk-behind tampers, walk-behind trenchers, sand blasters, concrete chippers, surface grinders, vibrator operators, wagon drillers.

HEAVY & HIGHWAY	BASE RATE	\$15.22
	FRINGE BENEFITS	4.53

Air track driller (all types), asphalt luteman and rakers, gunnite nozzleman, gunnite operators and mixers, grout pump operator, powderman and blaster, side rail setters, rail paved ditches, screw operators, tunnel laborers (free air), and water blasters.

HEAVY & HIGHWAY	BASE RATE	\$15.27
	FRINGE BENEFITS	4.53

Caisson workers (free air), cement finishers, environmental laborer - nuclear, radiation, toxic and hazardous waste - Levels A and B, miners and drillers (free air), tunnel blasters, and tunnel muckers (free air).

HEAVY & HIGHWAY	BASE RATE	\$15.87
	FRINGE BENEFITS	4.53





CLASSIFICATIONS RATE AND FRINGE BENEFITS

TEAMSTERS: (Continued)

Greaser, tire changer and mechanic helper.

HEAVY & HIGHWAY	BASE RATE	\$17.83
	*FRINGE BENEFITS	2.28

Truck mechanic	HEAVY & HIGHWAY	BASE RATE	\$18.06
		*FRINGE BENEFITS	2.28

Driver-single axle dump and flatbed truck, semi-trailer or pole trailer when used to pull building materials and equipment, tandem axle dump truck, driver of distributors, driver on mixer trucks (all types).

HEAVY & HIGHWAY	BASE RATE	\$18.13
	*FRINGE BENEFITS	2.28

Driver-Euclid and other heavy earthmoving equipment and low-boy, articulator, cat truck, 5-axle wheel, winch truck and A-Frame truck when used in transporting materials, Ross Carrier, forklift truck when used to transport building materials, driver on pavement breakers.

HEAVY & HIGHWAY	BASE RATE	\$18.14
	*FRINGE BENEFITS	2.28

\*FRINGE BENEFITS apply to employees who have been employed a minimum of twenty (20) workdays within any ninety (90) consecutive day period of that employer.

OPERATING ENGINEERS:

BUILDING	BASE RATE	\$13.44
	FRINGE BENEFITS	1.57

A-Frame winch truck, auto patrol, backfiller, batcher plant, bituminous paver, bituminous transfer machine, all types of boom cats, bulldozer, cableway, carry-all scoop, carry deck crane, central compressor plant operator, clamshell, concrete mixer (21 cu. ft. or over), concrete paver, truck-mounted concrete pump, core drills, crane, crusher plant, derrick, derrick boat, ditching and trenching machine, dragline, dredge operator, dredge engineer, earth movers, elevating grader and all types of loaders, grade-all, guries, heavy equipment robotics operator/mechanic, high lift, hoe-type machine, hoist (two or more drums), hoisting engine (two or more drums), horizontal directional drill operator, hydraulic boom truck, hydrocrane, hyster, Ke-Cal loader, Letourneau, locomotive, mechanic, mechanically operated laser screed, mechanic welder,

CLASSIFICATIONS

RATE AND FRINGE BENEFITS

OPERATING ENGINEERS: (Continued)

mucking machine, motor scraper, orangepeel bucket, piledriver, power blade, pumpcrete, push dozer, rock spreader attached to equipment, all rotary drills, roller (bituminous), scarifier, scoopmobile, shovel, side boom, subgrader, tailboom, telescoping type forklift, tow or push boat, tower cranes (French, German and other types), tractor shovel and truck crane, tunnel mining machines including moles, shields, or similar types of tunnel mining equipment.

HEAVY & HIGHWAY	*BASE RATE	\$19.85
	FRINGE BENEFITS	6.40

All air compressors (over 900 cu. ft. per min.), bituminous mixer, boom type tamping machine, bull float, concrete mixer (under 21 cu. ft.), electric vibrator compactor/self-propelled compactor, elevator (one drum or buck hoist), elevator (regardless of ownership when used to hoist building material), finish machine, firemen, flex-plane, forklift (regardless of lift height), form grader, hoist (one drum), joint sealing machine, mechanic helper, outboard motor boat, power sweeper (riding type), roller (rock), ross carrier, skid mounted or trailer mounted concrete pumps, switchman or brakeman, throttle valve man, tractair and road widening trencher, tractor (50 HP and over), truck crane oiler, tugger, welding machine, well points, and whirley oiler.

HEAVY & HIGHWAY	BASE RATE	\$17.43
	FRINGE BENEFITS	6.40

Greaser on grease facilities servicing heavy equipment.

HEAVY & HIGHWAY	BASE RATE	\$17.81
	FRINGE BENEFITS	6.40

Bituminous distributor, burlap and curing machine, caisson drill and core drill helper (track or skid mounted), cement gun, concrete saw, conveyor, deckhand oiler, grout pump, hydraulic post driver, hydro seeder, mud jack, oiler, paving joint machine, power form handling equipment, pump, roller (earth), steermen, tamping machine, tractors (under 50 H.P.) and vibrator.

HEAVY & HIGHWAY	BASE RATE	\$17.17
	FRINGE BENEFITS	6.40

\*Operators on cranes with booms one hundred fifty (150) feet and over (including jib) shall receive \$.50 above base rate.

CLASSIFICATIONS

RATE AND FRINGE BENEFITS

OPERATING ENGINEERS: (Continued)

Employees assigned to work below ground level are to be paid 10% above basic wage rate. This does not apply to open cut work.

WELDERS - Receive rate for craft in which welding is incidental.

NOTE: The type of construction shall be determined by applying the following definitions.

BUILDING CONSTRUCTION

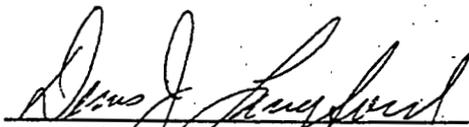
Building construction is the construction of sheltered enclosures with walk-in access for the purpose of housing persons, machinery, equipment, or supplies. It includes all construction of such structures, the installation of utilities and the installation of equipment, both above and below grade level, as well as incidental grading, utilities and paving.

HIGHWAY CONSTRUCTION

Highway construction includes the construction, alteration or repair of roads, streets, highways, runways, taxiways, alleys, trails, paths, parking areas, and other similar projects not incidental to building or heavy construction. It includes all incidental construction in conjunction with the highway construction project.

HEAVY CONSTRUCTION

Heavy projects are those projects that are not properly classified as either "building" or "highway". For example, dredging projects, water and sewer line projects, dams, flood control projects, sewage treatment plants and facilities, and water treatment plants and facilities are considered heavy.



Dennis J. Langford, Director  
Employment Standards,  
Apprenticeship & Training  
Kentucky Labor Cabinet



Joe Norsworthy, Secretary  
Kentucky Labor Cabinet  
Frankfort, Kentucky 40601

This 5th day of February, 1999.



OFFICE OF THE GOVERNOR  
DEPARTMENT FOR LOCAL GOVERNMENT  
FRANKFORT, KENTUCKY 40601-8204

PAUL E. PATTON  
GOVERNOR

BOB ARNOLD  
COMMISSIONER

August 11, 1999

RECEIVED LC  
AUG 18 1999 RLB

Mr. Larry Cann  
Haworth, Meyer & Boleyn, Inc.  
3HMB Circle  
Frankfort, Kentucky 40601

Haworth, Meyer & Boleyn

Dear Mr. Cann:

RE: Grayson County Water Line Expansion Project

Enclosed for distribution is a copy of wage decisions KY990027, modification six, to be used only for construction of the above referenced project. General wage decisions are published periodically and are effective from date of publication without a specific expiration date. This decision should not be used for this project without contacting the Department for Local Government and requesting any current modifications or supersedeas decisions. It is requested that you, along with the general contractor and/or engineer, review this determination to decide if additional classifications and rates will be needed. If so, on notice after contract award these rates will be furnished.

The Department for Local Government must be informed by notice of contract award and preconstruction conference of the contract award date. These forms are found in the chapter on Contracts at page VII-29 of the CDBG handbook for grantees.

Please contact Karen Roberts at 1-800/346-5606, ext. 291, if you require further information.

Sincerely,

James E. Claycomb, Director  
Division of Community Development

Enclosures

cc: Judge Gary L. Logsdon



AN EQUAL OPPORTUNITY EMPLOYER M/F/D  
1024 CAPITAL CENTER DRIVE, SUITE 340  
(502) 573-2382

<b>U. S. DEPARTMENT OF LABOR EMPLOYMENT STANDARDS ADMINISTRATION</b>	<b>REQUEST FOR DETERMINATION AND RESPONSE TO REQUEST</b>	<b>(Davis Bacon Act as Amended and Related Statutes)</b>
<b>FOR DEPARTMENT OF LABOR USE</b>  Response To Request  a. <input type="checkbox"/> Use area determination issued for this area  b. <input checked="" type="checkbox"/> The attached decision noted below is applicable to this project	Requesting Office (typed name and signature) <b>HMB Engineers - Larry Cann</b> Department, Agency, or Bureau  Date of Request <b>8/11/99</b> Est. Adverting Date <b>Sept. 1999</b> Prior Decision Number (if any)      Est. \$ Value of Contract <input type="checkbox"/> Under 1/2 Mil <input type="checkbox"/> 1/2 to 1 Mil <input checked="" type="checkbox"/> 1 to 5 Mil <input type="checkbox"/> Over 5 Mil  Location of Project (city or other description) <b>Grayson Co., KY.</b> County <b>Grayson</b> State <b>Kentucky</b> Address to which wage determination should be mailed. Must be complete and include ZIP Code: (Print or type) <b>Haworth, Meyer &amp; Boleyn, Inc.</b> <b>3 HMB Circle</b> <b>Frankfort, KY. 40601</b>	
Decision Number <b>KY990027, MOD 6</b>  Date of Decision <b>08/06/99</b>  Expires  Supersedes Decision Number	Phone Number <b>(502) 615-9800</b>  Est. Bid Opening Date <b>Sept. 1999</b>  Type of Work      Highway      Heavy <input type="checkbox"/> Pkg <input type="checkbox"/> <input checked="" type="checkbox"/> Resid CDBG Number	
Approved <i>Karen S. Roberts</i> Karen S. Roberts Federal Program Coordinator	Wage Survey by Agency Attached      Wage Survey by Agency in Progress <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Description of Work (Be specific) (Print or type) <b>Water Lines Expansions to the present system.</b>	
<b>CHECK OR LIST CRAFTS NEEDED</b> (Attach continuation sheet if needed)		
Asbestos workers Boiler makers Bricklayers Carpenters Cement masons Electricians Glaziers <input checked="" type="checkbox"/> Ironworkers <input checked="" type="checkbox"/> Laborers, (specify classes) <b>general - pipe laying</b>  Lathers Marble & tile setters, terrazzo workers Painters Plastermen Plasterers Plumbers Roofers Sheet metal workers Soft floor layers Steamfitters Welders - rate for craft <input checked="" type="checkbox"/> Truck drivers <input checked="" type="checkbox"/> Power equipment operators, (specify types) <b>bulldozer - back</b> <b>hoe</b> Other crafts		

GENERAL DECISION KY990027 08/06/99 KY27  
General Decision Number KY990027

Superseded General Decision No. KY980027

State: Kentucky

Construction Type:  
HEAVY  
HIGHWAY

County(ies):

ANDERSON	GALLATIN	MERCER
BATH	GRANT	MONTGOMERY
BOURBON	GRAYSON	NELSON
BOYD	GREENUP	NICHOLAS
BOYLE	HARDIN	OLDHAM
BRACKEN	HARRISON	OWEN
BRECKINRIDGE	HENRY	ROBERTSON
BULLITT	JEFFERSON	ROWAN
CARROLL	JESSAMINE	SCOTT
CARTER	LARUE	SHELBY
CLARK	LEWIS	SPENCER
ELLIOTT	MADISON	TRIMBLE
FAYETTE	MARION	WASHINGTON
FLEMING	MASON	WOODFORD
FRANKLIN	MEADE	

Heavy and Highway Construction Projects

Modification Number	Publication Date
0	03/12/1999
1	04/02/1999
2	05/14/1999
3	06/04/1999
4	06/25/1999
5	07/30/1999
6	08/06/1999

COUNTY(ies):

ANDERSON	GALLATIN	MERCER
BATH	GRANT	MONTGOMERY
BOURBON	GRAYSON	NELSON
BOYD	GREENUP	NICHOLAS
BOYLE	HARDIN	OLDHAM
BRACKEN	HARRISON	OWEN
BRECKINRIDGE	HENRY	ROBERTSON
BULLITT	JEFFERSON	ROWAN
CARROLL	JESSAMINE	SCOTT
CARTER	LARUE	SHELBY
CLARK	LEWIS	SPENCER
ELLIOTT	MADISON	TRIMBLE
FAYETTE	MARION	WASHINGTON
FLEMING	MASON	WOODFORD
FRANKLIN	MEADE	

BRIN0004D 04/01/1999

	Rates	Fringes
BRECKINRIDGE COUNTY:		
BRICKLAYERS	22.41	5.15

BRKY0001G 06/01/1999

	Rates	Fringes
BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER & TRIMBLE		

COUNTIES:

BRICKLAYERS	18.98	4.53
-------------	-------	------

---

BRKY0002F 01/01/1999

	Rates	Fringes
BRACKEN, GALLATIN, GRANT, MASON & ROBERTSON COUNTIES:		

BRICKLAYERS	20.46	5.54
-------------	-------	------

---

BRKY0007D 06/01/1998

	Rates	Fringes
BOYD, CARTER, ELLIOTT, FLEMING, GREENUP, LEWIS & ROWAN COUNTIES:		

BRICKLAYERS	21.67	6.70
-------------	-------	------

---

BRKY0017D 06/01/1998

	Rates	Fringes
ANDERSON, BATH, BOURBON, BOYLE, CLARK, FAYETTE, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS,		

OWEN, SCOTT, WASHINGTON & WOODFORD COUNTIES:

BRICKLAYERS	15.50	2.55
LAYOUT MEN	15.75	2.55

---

CARP0064A 07/01/1999

	Rates	Fringes
CARPENTERS	19.20	5.18
PILEDRIVERMEN	19.45	5.18
DIVERS	29.175	5.18

---

CARP1031P 06/01/1999

	Rates	Fringes
ANDERSON, BATH, BOURBON, BOYLE, CLARK, FAYETTE, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, OWEN, SCOTT & WOODFORD COUNTIES:		

MILLWRIGHTS	18.89	6.74
-------------	-------	------

---

CARP1031Q 06/01/1999

	Rates	Fringes
BOYD, CARTER, ELLIOTT, FLEMING, GREENUP, LEWIS, MASON, ROBERTSON, & ROWAN COUNTIES:		

MILLWRIGHTS	19.81	11.81
-------------	-------	-------

---

CARP1031R 06/01/1999

	Rates	Fringes
BRECKINRIDGE, BULLITT, CARROLL, GALLATIN, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES:		

MILLWRIGHTS	20.41	8.74
-------------	-------	------

---

CARP1066D 09/01/1998

	Rates	Fringes
BRACKEN & GRANT COUNTIES:		

MILLWRIGHTS 21.30 7.25

---

ELEC0183C 06/01/1997

Rates Fringes  
 ANDERSON, BATH, BOURBON, BOYLE, CLARK, FAYETTE, FRANKLIN,  
 HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS,  
 OWEN, ROBERTSON, SCOTT & WOODFORD COUNTIES:

ELECTRICIANS 19.70 6.24

---

ELEC0212Q 06/01/1999

Rates Fringes  
 BRACKEN, GALLATIN & GRANT COUNTIES:

ELECTRICIANS 21.80 6.91

---

ELEC0317L 06/02/1999

Rates Fringes  
 BOYD, CARTER, ELLIOTT & ROWAN COUNTIES:

ELECTRICIANS:  
 Electricians 21.01 10.98  
 Cable Splicers 22.06 11.01

---

ELEC0369J 06/01/1998

Rates Fringes  
 BRECKINRIDGE, BULLITT, CARROLL, GRAYSON, HARDIN, HENRY,  
 JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY,  
 SPENCER, TRIMBLE & WASHINGTON COUNTIES:

ELECTRICIANS 22.25 6.34

---

ELEC0575B 06/01/1999

Rates Fringes  
 FLEMING, GREENUP, LEWIS & MASON COUNTIES:

ELECTRICIANS 24.50 6.905

---

ENGI0181Y 01/01/1999

Rates Fringes  
 POWER EQUIPMENT OPERATORS:  
 GROUP 1 19.85 6.40  
 GROUP 2 17.43 6.40  
 GROUP 3 17.81 6.40  
 GROUP 4 17.17 6.40

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1 - A-Frame Winch Truck; Auto Patrol; Backfiller; Batcher Plant; Bituminous Paver; Bituminous Transfer Machine; Boom Cat; Bulldozer; Mechanic; Cableway; Carry-All Scoop; Carry Deck Crane; Central Compressor Plant; Clamshell; Concrete Mixer (21 cu. ft. or Over); Concrete Paver; Truck-Mounted Concrete Pump; Core Drill; Crane; Crusher Plant; Derrick; Derrick Boat; Ditching & Trenching Machine; Dragline; Dredge Operator; Dredge Engineer; Elevating Grader & Loaders; Grade-All; Gurries; Heavy Equipment Robotics Operator/Mechanic; High Lift; Hoe-Type Machine; Hoist (Two or More Drums); Hoisting Engine (Two or More Drums); Horizontal Directional Drill Operator; Hydrocrane; Hyster; KeCal Loader; LeTourneau; Locomotive; Mechanic;

Mechanically Operated Laser Screed; Mechanic Welder; Mucking Machine; Motor Scraper; Orangepeel Bucket; Piledriver; Power

Blade; Pumpcrete; Push Dozer; Rock Spreader, attached to equipment; Rotary Drill; Roller (Bituminous); Scarifier; Scoopmobile; Shovel; Side Boom; Subgrader; Tailboom; Telescoping Type Forklift; Tow or Push Boat; Tower Crane (French, German & other types); Tractor Shovel; Truck Crane; Tunnel Mining Machines, including Moles, Shields or similar types of Tunnel Mining Equipment

GROUP 2 - Air Compressor (Over 900 cu. ft. per min.); Bituminous Mixer; Boom Type Tamping Machine; Bull Float; Concrete Mixer (Under 21 cu. ft.); Dredge Engine; Electric Vibrator; Compactor/Self-Propelled Compactor; Elevator (One Drum or Buck Hoist); Elevator (When used to Hoist Building Material); Finish Machine; Firemen & Hoist (One Drum); Flexplane; Forklift (Regardless of Lift Height); Form Grader; Joint Sealing Machine; Outboard Motor Boat; Power Sweeper (Riding Type); Roller (Rock); Ross Carrier; Skid Mounted or Trailer Mounted Concrete Pump; Switchman or Brakeman; Throttle Valve Person; Tractair & Road Widening Trencher; Tractor (50 H.P. or Over); Truck Crane Oiler; Tugger; Welding Machine; Well Points; & Whirley Oiler

GROUP 3 - Greaser on Grease Facilities servicing Heavy Equipment

GROUP 4 - Bituminous Distributor; Burlap & Curing Machine; Cement Gun; Concrete Saw; Conveyor; Deckhand Oiler; Grout Pump; Hydraulic Post Driver; Hydro Seeder; Mud Jack; Oiler; Paving Joint Machine; Power Form Handling Equipment; Pump; Roller (Earth); Steerman; Tamping Machine; Tractor (Under 50 H.P.); & Vibrator

CRANES WITH BOOMS 150 ft. & Over (Including JIB) \$.50 Premium

EMPLOYEES ASSIGNED TO WORK BELOW GROUND LEVEL ARE TO BE PAID 10% ABOVE BASIC WAGE RATE. THIS DOES NOT APPLY TO OPEN CUT WORK.

IRON0044I 06/01/1999

	Rates	Fringes
BOURBON (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan);		
CARROLL (Eastern third, including the Township of Ghent);		
FLEMING (Western part, excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksville, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);		
MASON (Western two-thirds, including Townships of Dover, Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley & Washington);		
NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers & Oakland Mills);		
OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);		

SCOTT (Northern two-thirds, including Townships of Biddle, Davis, Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers Gap, Sadieville, Skinnersburg & Stonewall) &

BRACKEN, GALLATIN, GRANT, HARRISON & ROBERTSON COUNTIES:

IRONWORKERS:

Structural	20.90	9.84
Fence Erector	18.81	9.84

IRON0070J 06/01/1999

Rates Fringes

BOURBON (Southern two-thirds, including Townships of Austerlity, Centerville, Clintonville, Elizabeth, Hutchison, Littlerock, North Middletown & Paris);

CARROLL (Western two-thirds, including Townships of Carrollton, Easterday, English, Locust, Louis, Prestonville & Worthville);

CLARK (Western two-thirds, including Townships of Becknerville, Flanagan, Ford, Pine Grove, Winchester & Wyandotte);

OWEN (Eastern eighth, including Townships of Glenmary, Gratz, Monterey, Perry Park & Tacketts Mill);

SCOTT (Southern third, including Townships of Georgetown, Great Crossing, Newtown, Stampling Ground & Woodlake);

ANDERSON, BOYLE, BRECKINRIDGE, BULLITT, FAYETTE, FRANKLIN, GRAYSON, HARDIN, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE, WASHINGTON & WOODFORD COUNTIES:

IRONWORKERS	20.96	9.67
-------------	-------	------

IRON0372F 06/01/1999

Rates Fringes

BOURBON (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan);

CARROLL (Eastern third, including the Township of Ghent);

FLEMING (Western part, Excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton,

Pecksrige, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);

MASON (Western two-thirds, including Townships of Dover, Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley & Washington);

NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers & Oakland Mills);

OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);

SCOTT (Northern two-thirds, including Townships of Biddle, Davis, Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers Gap, Sadieville, Skinnersburg & Stonewall);

BRACKEN, GALLATIN, GRANT, HARRISON & ROBERTSON COUNTIES:

IRONWORKERS, Reinforcing:

Up to & including 25-mile radius of Hamilton County, Ohio Courthouse	20.72	9.05
Beyond 25-mile radius of Hamilton County, Ohio Courthouse	20.97	9.05

---

IRON0769G 06/01/1999

CLARK (Eastern third, including Townships of Bloomingdale, Hunt, Indian Fields, Kiddville, Loglick, Rightangele & Thomson);

FLEMING (Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksville, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);

MASON (Eastern third, including Townships of Helena, Marshall, Orangeburg, Plumville & Springdale);

NICHOLAS (Eastern eighth, including the Township of Moorefield Sprout);

BATH, BOYD, CARTER, ELLIOTT, GREENUP, LEWIS, MONTGOMERY & ROWAN COUNTIES:

IRONWORKERS:

ZONE 1	22.51	10.02
ZONE 2	22.91	10.02
ZONE 3	24.91	10.02

- ZONE 1 - Up to 10 mi. radius of union hall, Ashland, Ky., 1643 Greenup Avenue
  - ZONE 2 - 10 to 50 mi. radius of union hall;
  - ZONE 3 - 50 mi. radius and beyond
- 

LABO0189C 07/01/1999

	Rates	Fringes
LABORERS:		
GROUP 1	15.35	5.13
GROUP 2	15.60	5.13
GROUP 3	15.65	5.13
GROUP 4	16.25	5.13

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Drill Tender; Environmental - Nuclear, Radiation; Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; & Wrecking of Concrete Form

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Burner & Welder; Bushhammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man;

Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; & Wagon Driller

GROUP 3 - Air Track Driller; Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Powderman & Blaster; Side Rail Setter; Rail Paved Ditch; Screw Operator; Tunnel (Free Air); & Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air)

PAIN0012M 06/13/1998

BRACKEN, GALLATIN, GRANT, MASON & OWEN COUNTIES:

PAINTERS:

	Rates	Fringes
GROUP 1	18.85	4.25
GROUP 2	19.35	4.25
GROUP 3	19.60	4.25
GROUP 4	19.85	4.25

PAINTER CLASSIFICATIONS

GROUP 1 - Brush; & Roller

GROUP 2 - Spray

GROUP 3 - Sandblasting; & Water Blasting

GROUP 4 - Bridges; Lead Paint Abatement; Elevated Tanks; & Steeplejacks

PAIN0118D 05/01/1999

ANDERSON, BRECKINRIDGE, BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES:

PAINTERS:

	Rates	Fringes
Brush	16.17	4.15
Abrasive Blaster; Fireproofing; Lead Abatement; Spray; & Waterblasting 4000 PSI and Above	16.67	4.15

PAIN1072D 06/01/1998

BOYD, CARTER, ELLIOTT, FLEMING, GREENUP, LEWIS & ROWAN COUNTIES:

PAINTERS:

	Rates	Fringes
Bridges	22.02	5.30
All Other Work	18.68	5.30

PAIN1072F 09/30/1997

BATH, BOURBON, BOYLE, CLARK, FAYETTE, FRANKLIN, HARRISON,

JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, ROBERTSON,  
SCOTT & WOODFORD COUNTIES:

PAINTERS:

Bridges	21.88	5.03
All Other Work	14.70	3.06

PLUM0059I 06/01/1998

BRACKEN, CARROLL (Eastern Half), GALLATIN, GRANT, MASON, OWEN  
& ROBERTSON COUNTIES:

PLUMBERS	22.78	7.74
----------	-------	------

\* PLUM0107F 08/01/1999

BRECKINRIDGE, BULLITT, CARROLL (Western Half), FRANKLIN (Western  
three-fourths), GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE,  
MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE &  
WASHINGTON COUNTIES:

PLUMBERS; GAS FITTERS:

Plumbing contracts less than \$150,000.00	17.84	5.32
All Other Plumbing contracts	22.76	5.32

PLUM0248C 06/01/1999

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS & ROWAN COUNTIES:

PLUMBERS & STEAMFITTERS	21.56	10.57
-------------------------	-------	-------

PLUM0392H 06/01/1999

BRACKEN, CARROLL (Eastern Half), GALLATIN, GRANT, MASON, OWEN &  
ROBERTSON COUNTIES:

PIPEFITTERS & PLUMBERS	24.50	6.41
------------------------	-------	------

PLUM0452C 11/01/1998

ANDERSON, BATH, BOURBON, BOYLE, CLARK, FAYETTE, FLEMING,  
FRANKLIN (Eastern one-fourth), HARRISON, JESSAMINE, MADISON,  
MERCER, MONTGOMERY, NICHOLAS, SCOTT & WOODFORD COUNTIES:

PIPEFITTERS & PLUMBERS:

Projects over 1 1/2 million dollars in piping contracts:

ZONE 1	21.50	4.82
ZONE 2	22.50	4.82

Projects under 1 1/2 million dollars in piping contracts:

ZONE 1	18.12	4.82
ZONE 2	19.12	4.82

ZONE 1 - Within 25 mile radius of Fayette County Courthouse

ZONE 2 - Beyond 25 mile radius of Fayette County Courthouse

PLUM0522D 08/01/1998

BRECKINRIDGE, BULLITT, CARROLL (Western Half), FRANKLIN (Western  
three-fourths), GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE,  
MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE &

WASHINGTON COUNTIES:

PIPEFITTERS & STEAMFITTERS	23.40	6.45
----------------------------	-------	------

---

SUKY2003A 02/05/1996

	Rates	Fringes
TRUCK DRIVERS:		
GROUP 1	14.62	5.92
GROUP 2	14.73	5.92
GROUP 3	14.91	5.92
GROUP 4	14.94	5.92
GROUP 5	15.01	5.92

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Mobile Batch Truck Tender

GROUP 2 - Greaser; Tire Changer; & Mechanic Tender

GROUP 3 - Single Axle Dump; Flatbed; Semi-trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Distributor; & Truck Mechanic

GROUP 4 - Mixer

GROUP 5 - Euclid & Other Heavy Earthmoving Equipment & Lowboy; Articulator Cat; 5-Axle Vehicle; Winch & A-Frame when used in transporting materials; Ross Carrier; Forklift when used to transport building materials; & Pavement Breaker

---

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

---

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(v)).

---

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U. S. Department of Labor  
200 Constitution Avenue, N. W.  
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N. W.  
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U. S. Department of Labor  
200 Constitution Avenue, N. W.  
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.  
END OF GENERAL DECISION

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS: that

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

a \_\_\_\_\_, hereinafter called Principal, and  
(Corporation, Partnership, or Individual)

\_\_\_\_\_  
(Name of Surety)

\_\_\_\_\_  
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

\_\_\_\_\_  
(Name of Owner)

\_\_\_\_\_  
(Address of Owner)

hereinafter called OWNER in the total aggregate penal sum  
of \_\_\_\_\_

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

in lawful money of the United States, for the payment of which sum well  
and truly to be made, we bind ourselves, our heirs, executors,  
administrators, successors, and assigns, jointly and severally, firmly  
by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal  
entered into a certain contract with the OWNER, dated the  
\_\_\_\_\_ day of \_\_\_\_\_ 19\_\_\_\_, a copy of which is hereto  
attached and made a part hereof for the construction of:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER with or without notice to the SURETY and during the one year guaranty period and if the PRINCIPAL shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said SURETY, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to WORK to be performed thereunder or the SPECIFICATIONS accompanying same shall in any way affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that it is expressly agreed that the BOND shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the Contract not increasing the contract price more than 20 percent, so as to bind the PRINCIPAL and the SURETY to the full and faithful performance of the CONTRACT as so amended. The term "Amendment", wherever used in this BOND, and whether referring to this BOND, the Contract or the Loan Documents shall include any alteration, addition, extension, or modification of any character whatsoever.

PROVIDED, FURTHER, that no final settlement between the OWNER and the PRINCIPAL shall abridge the right of the other beneficiary hereunder, whose claim may be unsatisfied. The OWNER is the only beneficiaries hereunder.

IN WITNESS WHEREOF, this instrument is executed in \_\_\_\_\_  
Number \_\_\_\_\_  
counterparts, each one of which shall be deemed an original, this the  
\_\_\_\_\_ day of \_\_\_\_\_

ATTEST:

\_\_\_\_\_  
Principal

\_\_\_\_\_  
(Principal) Secretary

(SEAL)

By \_\_\_\_\_ (s)

\_\_\_\_\_  
Witness as to Principal) /

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
Surety

ATTEST:

\_\_\_\_\_  
Witness to Surety

BY

\_\_\_\_\_  
Attorney-in-Fact

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Address)

NOTE: Date of BOND must not be prior to date of Contract.

If CONTRACTOR is partnership, all partners should execute BOND.  
IMPORTANT: Surety companies executing BONDS must appear on the Treasury  
Department's most current list (Circular 570 as amended) and be  
authorized to transact business in the state where the Project is  
located.

oOo

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS: that

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

a \_\_\_\_\_ hereinafter called PRINCIPAL and  
(Corporation, Partnership or Individual)

\_\_\_\_\_  
(Name of Surety)

hereinafter called SURETY, are held and firmly bound unto \_\_\_\_\_

\_\_\_\_\_  
(Name of Owner)

\_\_\_\_\_  
(Address of Owner)

hereinafter called OWNER and unto all persons, firms, and corporations who or which may furnish labor, or who furnish materials to perform as described under the contract and to their successors and assigns in the total aggregate penal sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the PRINCIPAL entered into a certain contract with the OWNER, dated the \_\_\_\_\_ day of \_\_\_\_\_ 19\_\_\_\_, a copy of which is hereto attached and made a part hereof for the construction of:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
NOW, THEREFORE, if the PRINCIPAL shall promptly make payment to all persons, firms, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such contract, and any authorized extensions or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and for all labor cost incurred in such WORK including that by a SUBCONTRACTOR, and to any mechanic or materialman lienholder whether it acquires its lien by operation of State or Federal law; then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, that beneficiaries or claimants hereunder shall be limited to the SUBCONTRACTORS, and persons, firms, and corporations having a direct contract with the PRINCIPAL or its SUBCONTRACTORS.

PROVIDED, FURTHER, that the said SURETY for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any way affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of this contract or to the WORK or to the SPECIFICATIONS.

PROVIDE, FURTHER, that no suit or action shall be commenced hereunder by any claimant: (a) Unless claimant, other than one having a direct contract with the PRINCIPAL shall have given written notice to any two of the following: The PRINCIPAL, the OWNER, or the SURETY above named within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the PRINCIPAL, OWNER, or SURETY, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer. (b) After the expiration of one (1) year following the date of which PRINCIPAL ceased work on said CONTRACT, is being understood, however, that if any limitation embodied in the BOND is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

PROVIDED, FURTHER, that it is expressly agreed that this BOND shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the Contract not increasing the contract price more than 20 percent, so as to bind the PRINCIPAL and the SURETY to the full and faithful performance of the Contract as so amended. The term "Amendment", wherever used in this BOND and whether referring to this BOND, the contract or the loan Documents shall include any alteration, addition, extension or modification of any character whatsoever.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

WITNESS WHEREOF, this instrument is executed in \_\_\_\_\_  
Number  
counterparts, each of which shall be deemed an original, this the \_\_\_\_\_  
day of \_\_\_\_\_.

ATTEST:

\_\_\_\_\_  
Principal

\_\_\_\_\_  
(Principal) Secretary

(SEAL)

By \_\_\_\_\_ (s)

\_\_\_\_\_  
(Address)

Witness as to Principal

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
Surety

ATTEST:

\_\_\_\_\_  
Witness as to Surety

By \_\_\_\_\_  
Attorney-in-Fact

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Address)

NOTE: Date of BOND must not be prior to date of Contract.  
If CONTRACTOR Is partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury  
Department's most current list (Circular 570 as amended) and be  
authorized to transact business in the State where the Project is  
located.

oOo

PB-6

CONTRACT AGREEMENT

THIS AGREEMENT, made this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_

by and between \_\_\_\_\_  
(Owner)

acting through its \_\_\_\_\_ hereinafter called  
(Mayor, Utility Commission, Chairmen)

the OWNER and \_\_\_\_\_ doing business as  
(Contractor)

\_\_\_\_\_ of the city of \_\_\_\_\_  
(an individual) (partnership) (a corporation)

\_\_\_\_\_, County, State of \_\_\_\_\_

hereinafter called the CONTRACTOR.

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

The CONTRACTOR will commence and complete the construction of

\_\_\_\_\_  
\_\_\_\_\_

The CONTRACTOR will furnish all of the materials, supplies, tools, equipment, labor and other services necessary for the construction and completion of the project described herein.

The CONTRACTOR will commence work under this contract on or before the date to be specified by the Owner, in a written "Notice to Proceed" and will fully complete the project within 120 consecutive calendar days thereafter. The CONTRACTOR further agrees to pay as liquidated damages, the sum of \$ 500.00 for each consecutive calendar day that the work remains uncomplete after the expiration date of this contract, as modified by Change Order.

The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS for the sum of \$ \_\_\_\_\_, or as shown in the Bid Schedule, Pages CON \_\_\_\_\_ thru CON \_\_\_\_\_.

The term "CONTRACT DOCUMENTS" means and includes the following:  
 SPECIFICATIONS prepared or issued by Haworth, Meyer & Boleyn, Inc.

<u>TITLE</u>	<u>DESIGNATION</u>	<u>TOTAL PAGES</u>
Advertisement for Bids	<u>AD</u>	<u>                    </u>
Instructions to Bidders	<u>IB</u>	<u>                    </u>
General Conditions	<u>GC</u>	<u>                    </u>
Labor Regulations	<u>LR</u>	<u>                    </u>
Performance and Payment Bond	<u>PB</u>	<u>                    </u>
Contract Agreement	<u>CON</u>	<u>                    </u>
Notice of Award	<u>NA</u>	<u>                    </u>
Notice to Proceed	<u>NP</u>	<u>                    </u>
Change Order Format	<u>CO</u>	<u>                    </u>
Special Conditions	<u>SC</u>	<u>                    </u>
Technical Specifications	<u>TS</u>	<u>See Below</u>

Technical Specifications

<u>DIVISION (TS)</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>
<u>PAGES</u>																

Where the "NA" is shown indicates that the division is not applicable to and is omitted from this Contract.

DRAWINGS prepared by Haworth, Meyer & Boleyn, Inc.

numbered \_\_\_\_\_ through \_\_\_\_\_ and dated May 1999.

The following ADDENDA are included as part of this Contract:

ADDENDUM NO. \_\_\_\_\_

DATE

The OWNER shall make progress payments as the work is completed, in accordance with the appropriate Articles of the General Conditions.

Final payment shall be due thirty (30) days after completion and acceptance of the work.

Before issuance of final certificate, the Contractor shall submit evidence satisfactory to the Owner that all payrolls, material bills, and other indebtedness connected with the work have been paid.

If, after the work has been substantially completed, full completion thereof is materially delayed through no fault of the Contractor, and the Engineer so certifies, the Owner shall, upon certificate of the Engineer and without terminating the contract, make payment of the balance due for that portion of the work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

BID SCHEDULE

All executed Bid Documents will be included in this position in the final Contract Documents that are executed between the Owner and the Contractor.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in \_\_\_\_\_ copies each of which shall be deemed an original on the date first above written.

This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

\_\_\_\_\_  
CONTRACTOR

ATTEST:

\_\_\_\_\_  
Title  
(SEAL)

By \_\_\_\_\_  
Title

ATTEST:

\_\_\_\_\_  
Title

\_\_\_\_\_  
OWNER

By \_\_\_\_\_  
Title

CERTIFICATE OF OWNER'S ATTORNEY

I, the undersigned, \_\_\_\_\_, the duly authorized and acting legal representative of \_\_\_\_\_, do hereby certify as follows:

I have examined the attached contract(s) and performance and payment bond(s) and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions, and provisions thereof.

\_\_\_\_\_  
Date: \_\_\_\_\_

FmHA Concurrence.

As lender or insurer of funds to defray the costs of this contract, and without liability for any payments thereunder, the Farmers Home Administration (FmHA) hereby concurs in the award of this CONTRACT to

\_\_\_\_\_

U.S. Department of Agriculture  
Farmers Home Administration

By \_\_\_\_\_ Title \_\_\_\_\_

Date \_\_\_\_\_

This CONTRACT shall not be effective unless and until concurred in by the State Director of the Farmers Home Administration, U.S. Department of Agriculture or a delegated representative.

NOTICE OF AWARD

TO: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PROJECT  
Description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

The OWNER has considered the BID submitted by you for the above described WORK in response to its Advertisement for Bids dated \_\_\_\_\_, 19\_\_\_\_, and Information for Bidders.

You are hereby notified that your BID has been accepted for items in the amount of \$\_\_\_\_\_.

You are required by the Information for Bidders to execute the Agreement and furnish the required CONTRACTOR'S Performance BOND, Payment BOND and certificates of insurance within ten (10) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said BONDS within ten (10) days from the date of this Notice, said OWNER will be entitled to consider all your rights arising out of the OWNER's acceptance of your BID as abandoned and as a forfeiture of your BID BOND. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_.

\_\_\_\_\_  
Owner  
By \_\_\_\_\_  
Title \_\_\_\_\_

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged

by \_\_\_\_\_ this  
the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_.  
By \_\_\_\_\_  
Title \_\_\_\_\_

NOTICE TO PROCEED

TO: \_\_\_\_\_ DATE: \_\_\_\_\_  
\_\_\_\_\_  
Project: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

You are hereby notified to commence WORK in accordance with the Agreement dated \_\_\_\_\_, 19\_\_\_\_, on or before \_\_\_\_\_, 19\_\_\_\_, and you are to complete the WORK within \_\_\_\_\_ consecutive calendar days thereafter. The date of completion of all WORK is therefore \_\_\_\_\_, 19\_\_\_\_.

\_\_\_\_\_  
Owner

By \_\_\_\_\_

Title \_\_\_\_\_

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by \_\_\_\_\_

\_\_\_\_\_ this the \_\_\_\_\_, 19\_\_\_\_

By \_\_\_\_\_

Title \_\_\_\_\_

Employer Identification  
Number \_\_\_\_\_

oOo

NP-1

CONTRACT CHANGE ORDER

ORDER NO.
DATE
STATE
COUNTY

CONTRACT FOR \_\_\_\_\_

OWNER \_\_\_\_\_

To \_\_\_\_\_  
(Contractor)  
You are hereby requested to comply with the following changes from the contract plans and specifications:

Description of Changes (Supplemental Plans and Specifications Attached)	DECREASE in Contract Price	INCREASE in Contract Price
	\$ _____	\$ _____
TOTALS	\$ _____	
NET CHANGE IN CONTRACT PRICE	\$ _____	

JUSTIFICATION: \_\_\_\_\_

The amount of the Contract will be (Decreased) (Increased) By The Sum Of: \_\_\_\_\_ Dollars (\$ \_\_\_\_\_).

The Contract Total including this and previous Change Orders Will Be: \_\_\_\_\_ Dollars (\$ \_\_\_\_\_).

The Contract Period Provided for Completion Will Be (Increased) (Decreased) (Unchanged): \_\_\_\_\_ Days  
This document will become a supplement to the contract and all provisions will apply hereto.

Requested _____ (Owner)	_____ (Date)
Recommended _____ (Owner's Architect/ Engineer)	_____ (Date)
Accepted _____ (Contractor)	_____ (Date)
Approved By FmHA _____ (Name and Title)	_____ (Date)

This information will be used as a record of any changes to the original construction contract.



#72

Commonwealth of Kentucky  
**Transportation Cabinet**

Department of Highways, District Four  
634 East Dixie, P.O. Box 309  
Elizabethtown, KY 42702-0309  
502/766-5066 (Fax) 502/766-5069

James C. Codell, III  
Secretary of Transportation

T. Kevin Flanery  
Deputy Secretary

Paul E. Patton  
Governor

June 16, 1999

GRAYSON COUNTY WATER DISTRICT  
POST OFFICE BOX 1118  
BOWLING GREEN, KY 42101

SUBJECT: Grayson County, MP-43-224-5.4  
KY 224 ()  
Permit Number 04-0343-99

Dear SHAW KEVIN:

Your application for an encroachment permit has been approved by the Department of Highways. We are returning two copies of the approved permit so one may be kept in your record files. The other copy must be given to the party responsible for completing the project and must be kept at the jobsite at all times.

Please see that the work is done in strict conformity with the permit and any other applicable conditions (See Form TC99-21 and any other attached documents, conditions or specifications). The work should be completed no later than January 1, 2001. When the permitted work and any necessary restoration have been completed please notify this office by using the attached form which will serve as notification for final inspection.

If there are any questions regarding this permit, please do not hesitate to contact John A. Wallace at 502-766-5066 or fax number 502-766-5069.

Sincerely,

*for* John A. Wallace  
S. R. Smith  
Chief District Engineer  
Department of Highways  
District 4 - Elizabethtown  
Post Office Box 309  
Elizabethtown, KY 42702-0309

NOTICE OF COMPLETION OF ENCROACHMENT PERMIT WORK

Please return this form to the District Office when work is completed and ready for final inspection.

---

Applicant Identification

Name: GRAYSON COUNTY WATER DISTRICT

Contact Person: SHAW KEVIN

Address: POST OFFICE BOX 1118

City: BOWLING GREEN

State: KY Zip: 42101

Telephone: 502-842-0052

Project Identification

Permit Number: 04-0343-99

County: Grayson

Route Number: 224

Road Name:

Milepoint: 5.4

---

I wish to notify the Department of Highways that the above mentioned permit work and any necessary right of way restoration have been completed and are ready for final inspection.

---

Applicant

---

Please Return To:

Department of Highways  
District 4 Elizabethtown  
Post Office Box 309  
Elizabethtown, Ky. 42702-0309

Attention:

John A. Wallace

KENTUCKY TRANSPORTATION CABINET  
 Department of Highways  
 Permits Branch

TC 99-1  
 Rev. 7/95

Released Date \_\_\_\_\_

**ENCROACHMENT PERMIT**

PERMIT NO. 04-0343-99

APPLICANT IDENTIFICATION:

NAME: Grayson County Water District  
 CONTACT PERSON: Kevin Shaw  
 ADDRESS: 113 South Lee Avenue P.O. Box 217  
 CITY: Leitchfield  
 STATE: KY ZIP CODE: 42755-0217  
 PHONE: area code ( 502 ) 259-3161

PROJECT IDENTIFICATION:

ACCESS CONTROL  By Permit  Partial  Full  
 COUNTY: Grayson PRIORITY ROUTE NO: KY 224  
 MILEPOINT: S-4  Left  Right  X-ing  
 PROJECT STATUS:  Maint.  Const.  Design  
 PROJECT # STATE: MP 043 0229 005-006  
 PROJECT # FEDERAL: \_\_\_\_\_  
 ROAD/STREET NAME: \_\_\_\_\_

TYPE OF ENCROACHMENT:

- COMMERCIAL ENTRANCE - BUSINESS  
 PRIVATE ENTRANCE:  Single Family  Farm  
 UTILITY:  Overhead  Underground  
 GRADE:  Fill  Landscape on R/W  
 AIRSPACE:  Agreement  Lease  
 OTHER: (Specify) \_\_\_\_\_

ATTACHMENTS:

- Standard Drawings (List on TC 99-21 under Misc.)  
 Applicant's Plans  
 Highway Plan and Profile Sheets  
 TC 99-3 (Ponding Encroachment Specs. & Conditions)  
 TC 99-4 (Rest Area Usage Specs. & Conditions)  
 TC 99-5 (Tree Cutting/Trimming Specs. & Conditions)  
 TC 99-6 (Chemical Use of Specs. & Conditions)  
 TC 99-10 (Typical Hwy. Boring Crossing Detail)  
 TC 99-12 (Overhead Utility Encroachment Diagram)  
 TC 99-13 (Surface Restoration Methods)  
 TC 99-21 (Encroachment Permit General Notes & Specs.)  
 TC 99-22 (Agreement for Services to be Performed)  
 TC 99-23 (Mass Transit Shelter Specs. & Conditions)  
 Other Attachments (Specify): \_\_\_\_\_

TYPE OF INDEMNITY:

- Bond  Cash  
 SELF-INSURED AMOUNT ENCUMBERED \$ \_\_\_\_\_  
 OTHER 2,000

NAME AND ADDRESS OF LOCAL INSURANCE AGENCY OR SELF-

INSURED REPRESENTATIVE: Smith Manus 3912466-118

INDEMNITY: The applicant, in order to secure this obligation, has deposited with the Transportation Cabinet as a guarantee of conformance with the Department's Encroachment Permit requirements, an Indemnity in the amount of \$ \_\_\_\_\_ as determined by the Department. It shall be the responsibility of the applicant or permittee, his heirs and assignees to keep all indemnities in full force until construction or reconstruction has been completed and duly accepted by an authorized agent of the Transportation Cabinet, Department of Highways.

BRIEF DESCRIPTION OF WORK TO BE DONE: (If private entrance, show sketch with pipe location. Separate attached drawings required for encroachments other than private entrances.) This project is to provide water service for residents in Grayson County, Kentucky. See Applicants plan sheets attached

BORE @ MP S-4

See Plans

IMPORTANT (PLEASE READ): Applicant  does  does not intend to apply for excess R/W

When the work is completed in accordance with the terms of this encroachment permit, your indemnity will be released. However, the permit is effective until revoked by the Transportation Cabinet and the terms on the permit accompanying permit documents and drawings remain in effect as long as the encroachment exists. **FUTURE MAINTENANCE OF THE ENCROACHMENT IS THE RESPONSIBILITY OF THE PERMITTEE.** It is important that you understand the requirements of this encroachment permit application and accompanying documents. If you have not done so, it is suggested that you review these documents and place the permit package in a safe place for future reference.

A copy of this permit and all documents shall be given to your contractor and shall be readily available at the work site for the encroachment permit inspector to review at all times. Failure to meet this requirement may result in cancellation of this permit.

IN THE EVENT THIS APPLICATION IS APPROVED, THIS DOCUMENT SHALL CONSTITUTE A PERMIT FOR THE APPLICANT TO USE THE RIGHT-OF-WAY, BUT ONLY IN THE MANNER AUTHORIZED BY THIS DOCUMENT AND REGULATIONS OF THE DEPARTMENT AND THE DRAWINGS, PLANS, ATTACHMENTS, AND OTHER PERTINENT DATA ATTACHED HERETO AND MADE A PART HEREOF

**ENCROACHMENT PERMIT GENERAL NOTES & SPECIFICATIONS**

**I. SAFETY**

**A. General Requirements**

- All signs and control of traffic shall be in accordance with the Manual on Uniform Traffic Control Devices for Streets and Highways, latest edition, Part VI, and safety requirements shall comply with the Permits Manual.
- All work necessary in shoulder or ditchline areas of a state highway is to be scheduled to be promptly completed so that hazards adjacent to the traveled-way are kept to an absolute minimum.
- No more than one (1) traveled-lane is to be blocked or obstructed during normal working hours. All signs and flagmen during lane closure shall conform to the Manual on Uniform Traffic Control Devices.
- When it is necessary to block one (1) traveled-lane of a state highway, the normal working hours shall be as directed by the Department. No lanes are to be blocked or obstructed during adverse weather conditions (i.e., rain, snow, fog, etc.) without specific permission from the Department. Working hours shall be between \_\_\_\_\_ and \_\_\_\_\_.
- The traveled-way and shoulders shall be kept clear of mud and other construction debris at all times during construction of the permitted facility.
- No nonconstruction equipment or vehicles or office trailers will be allowed on the right-of-way during working hours.
- The right-of-way shall be left free and clear of equipment, material, and vehicles during non-working hours.

**B. Explosives**

- No explosive devices or explosive material shall be used within state right-of-way without proper license and approval of Kentucky Department of Mines and Minerals, Explosive Division.

**C. Other Safety Requirements**

**II. UTILITIES**

- \*All work necessary within the right-of-way shall be behind a temporary fence erected prior to a boring operation.
- \*The temporary woven wire fence shall be removed immediately upon completion of work on the right-of-way and control of access immediately restored to original condition, in accordance with applicable Kentucky Department of Highways Standard Drawings.
- \*All vents, valves, manholes, etc. are to be located outside the right-of-way.
- \*Encasement pipe shall extend from right-of-way line to right-of-way line and shall be one continuous run of pipe. The encasement pipe shall be welded at all joints.
- The boring pit and tail ditch shall extend past the existing toe of slope or bottom of ditch line and shall be a minimum of 30" deep.
- Encasement pipe shall conform to current standards for highway crossings in accordance with the Permits Manual.
- Parallel lines shall be constructed between back slope of ditch line and right-of-way line and shall have a minimum of 30 " cover above top of pipe or conduit. (30" preferred)
- All pavement cuts shall be restored per Kentucky Transportation Cabinet Form No. TC 99-13.
- Aerial crossing of this utility line shall have a minimum clearance of \_\_\_\_\_ feet from the high point of the roadway to the low point of the line (calculated at the coefficient for expansion of 120 degrees Fahrenheit).
- The 30' clear zone requirement will be met to the extent possible in accordance with Chapter 99-02.0313 of the Permits Manual.
- Special Requirements:

\*Applies to Fully Controlled Access Highways ONLY

**III. GENERAL**

**A. OSHA**

Kentucky Occupational Safety and Health Standards for the construction industry which has the effect of law states in part: (Page 52 1926.651 Specific Excavation Requirements) "Prior to opening an excavation, effort shall be made to determine whether underground installations: i.e., sewer, telephone, water, fuel, electric lines, etc., will be encountered, and if so, where such underground installations are located. When the excavation approaches the estimated location of such an installation, the exact location shall be determined and when it is uncovered, proper supports shall be provided for the existing installation. Utility companies shall be contacted and advised of proposed work prior to the start of actual excavation."

**B. Archaeological**

Whenever materials of an archaeological nature are discovered during the course of construction work or maintenance operations, contact shall be made immediately with the Division of Environmental Analysis which maintains an archaeologist on its staff, or with the Office of the State Archaeologist located at the University of Kentucky. Following this consultation, further action shall be decided on a case-by-case basis by the State Highway Engineer or the Transportation Planning Engineer or their designated representative.

**C. Utilities in the Work Areas**

The permittee is to be responsible for any damage to existing utilities and any utility modifications or relocations within State right-of-way necessary, as determined by the Department or by the owner of the utility, are to be at the expense of the permittee and subject to the approval of the Department.

All existing manholes and valve boxes are to be adjusted to be flush with finished grade.

**IV. RIGHT-OF-WAY RESTORATION**

All disturbed portions of the right-of-way are to be restored to grass as per Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition). A satisfactory turf, as determined by the Department, is to be established by the permittee prior to release of indemnity. Sodding or seeding as follows:

Lawn or High Maintenance Situation	-70% Lawn Fescue (e.g., variety - Falcon)
	-30% Bluegrass or
	70% Lawn Rye (e.g., variety - Derby)
	30% Bluegrass
Right-off-Way Lawn Maintenance Situation	-70% KY 31 Fescue
	-30% Perennial Rye Grass or
	100% KY Fescue

Two tons clean straw mulch per acre of seeding.

Prior to seeding, the ground must be prepared in accordance with Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition).

Substitutes for sod such as artificial turf or rocked mulch or paved areas may be acceptable if they are aesthetically pleasing.

All ditch flow lines and all ditch side slopes are to be sodded.

Existing concrete right-of-way markers are not to be disturbed, but if damaged in any way, they are to be entirely replaced by the permittee with new concrete markers to match the original markers, in accordance with Kentucky Department of Highways Standard Drawings. Markers which are entirely removed are to be re-established in the proper locations by the permittee and to the satisfaction of the Department.

Other right-of-way restoration requirements are as follows:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**V. DRAINAGE**

All pipe is to be laid in a straight alignment, to proper grades, and with all materials and methods of installation including bedding and joint seating in accordance with Department Standard Specifications for Road and Bridge Construction, latest edition. Pipe is not to be cover until inspected by the Department and express permission obtained to make backfill.

All gutter lines at the base of new curbs are to be on continuous grades, and pockets of water along curbs, or in entrance areas or other paved areas within the right-of-way, are not acceptable.

All drainage structures and appurtenances (manholes, catch basins, curbing, inlet basins, etc.) shall conform to Department specification and shall be constructed in accordance with the Department Standard Drawings. Type required:

\_\_\_\_\_

**PAVING**

- No bituminous pavement is to be installed within the right-of-way between November 15 and April 1, nor when the temperature is below 40°F, without the express consent of the Department. No bituminous pavement is to be installed when the underlying course is wet.
- Paving within the right-of-way shall be as follows:
  - Base (Type) \_\_\_\_\_ (Thickness) \_\_\_\_\_
  - Surface Base (Type) \_\_\_\_\_ (Thickness) \_\_\_\_\_
  - Finished Surface (Type) \_\_\_\_\_ (Thickness) \_\_\_\_\_
- Existing pavement and shoulder material shall be removed to accommodate the above paving specifications.
- The finished surface of all new pavement within the right-of-way shall be true to the required slope and grade, uniform in density and texture, free of irregularities, and equivalent in riding qualities to the adjacent highway pavement or as determined by the Department of Highways.
- All materials and methods of construction, including base and subgrade preparation, shall be in accordance with Kentucky Department of Highways Specifications for Road and Bridge Construction, latest edition.
- 24 hours notice to the Department is required prior to beginning paving operations:
 

Phone: \_\_\_\_\_ Name \_\_\_\_\_
- To insure proper surface drainage the new pavement is to be flush with the edge of existing highway pavement and is to slope away from the existing edge of the pavement as specified on drawings.
- Existing edge of pavement shall be saw cut to provide a straight and uniform joint for new pavement. An approved joint sealer, in accordance with Kentucky Department of Highways Standard Specifications (latest edition) shall be applied between new and existing pavement.

**VII. SIDEWALKS SPECIFICATIONS**

**A. New Sidewalks**

- Sidewalks are to be constructed of Class A concrete (3,500 p.s.i. test), are to be \_\_\_\_\_ feet in width, are to be 6" in thickness across the bituminous entrance and 4" in thickness across the remaining sections.
- Sidewalks are to have tooled joints, not less than 1" in depth at four (4) foot intervals, and ½ preformed expansion joints extending entire through the sidewalk at intervals not to exceed fifty (50) feet.

\* This dimension should be equal to the width of the sidewalk

- All materials and methods of construction, including curing, is to be in accordance with Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, latest edition.

**B. Existing Sidewalks**

- (Applicable if existing sidewalks are being relocated) Use of the sidewalk is not to be blocked or obstructed, and a usable walkway is to be maintained across the construction area at all times.
- All damaged sections of the sidewalks are to be entirely replaced to match existing sections.

**VIII. DENSE GRADED SHOULDERS**

- Any existing dense graded aggregate shoulders in the entire frontage within the construction area, which have been disturbed, damaged, on which dirt has been placed or mud is deposited or tracked, are to be restored to original condition by removal of all contaminated material and replaced to proper grade with new dense graded aggregate.
- All new aggregate shoulders as specified on the plan are to consist of 5" compacted dense graded aggregate 2½ pounds per square yard calcium chloride.
- All dense graded aggregate shoulders are to slope away from the new edge of pavement at the rate of ¼" per foot.

**IX. CURBING**

**A. Bituminous Curbs**

- Bituminous concrete curbs shall be given a paint coat of asphalt emulsion.
- The surface under the bituminous concrete curb shall be tacked with asphalt emulsion.
- All bituminous concrete curbs shall be constructed of a Class I bituminous concrete mixture as specified by official Department of Highways specifications.
- All bituminous curbs shall be of the rolled curb type with a minimum base width of 8" and a minimum height of \_\_\_\_\_ inches. The top of the curb shall be constructed in such a manner as to guarantee a uniform rolled effect throughout the entire run.

**B. Concrete Curbs**

- All curbs or curb and gutter are to be constructed of Class A concrete (3,500 p.s.i. test) and are to be uniform in height, width, and alignment, true to grade and satisfactory in finish and appearance as determined by the Department. All materials and methods construction, including curing, is to be in accordance with Department of Highways Standard Specifications for Road and Bridge Construction, latest edition.
- All concrete curbs are to be 6" in width, extend \_\_\_\_\_ " above finished grade and 12" below finished grade, with all visible edge rounded to 1/2" radii.
- All concrete curbs shall have expansion joints constructed at intervals of not more than 30 feet and 1/2" premolded expansion joint mat (cut to conform to the curb or to the curb and gutter section) shall be used in each expansion joint.
- The last \_\_\_\_\_ feet of all-concrete curbs are to be tapered down to finish grade.

**X. RIGHT-OF-WAY FENCE REPLACEMENT**

- The replacement fence shall be a height of at least 48" and shall be of sufficient density to contain all animals. (If applicable)
- The replacement fence shall be a minimum of one foot (1') and a maximum of two feet (2') outside the right-of-way line.
- The fence materials and design shall meet accepted industry standards and be treated as paintable.
- The permittee shall be required to maintain the fence in a high state of repair.
- The existing fence shall be removed by permittee and stored at Department's maintenance storage yard for future reuse by the Department.
- The control of access shall not be diminished as a result of replacement of the fence.
- Miscellaneous:

---

---

---

---

**NOTICE TO PERMITTEE**

THE PERMITTEE AGREES THAT ALL WORK WITHIN THE EXISTING RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE PLANS AS APPROVED AND PERMITTED BY AN ENCROACHMENT PERMIT, ANY CHANGES OR VARIANCES MADE AT THE TIME OF CONSTRUCTION WITHOUT WRITTEN APPROVAL FROM THE DEPARTMENT OF HIGHWAYS SHALL BE REMOVED BY THE PERMITTEE AT NO EXPENSE TO THE DEPARTMENT OF HIGHWAYS AND SHALL BE REDONE TO CONFORM WITH THE APPROVED PLANS.

...see agrees to the following terms and conditions:

The permittee shall comply with and is bound by the requirements of the Department's Permits Manual as revised to and in effect on the date of the issuance of this permit which is made a part hereof by reference.

2. Permittee agrees that if the Department determines that vehicular capacity deficiencies or over capacity conditions develop as a result of the installation and use of this facility, the permittee shall adjust, relocate, or reconstruct the facilities and/or provide and bear the expenses for signs, storage lanes, or other corrective measures reasonably deemed necessary by the Department and as set forth in the Department's Permit Manual within a reasonable length of time after receipt of written notice regarding such adjustments, relocation, additions, modifications, and/or corrective measures, such time to be specified in the notice. In cases where traffic signals are permitted or required, as determined by the Department, the costs for signal equipment and installation(s) shall be borne by the permittee and/or the Department in accordance with Department policy then in force as set forth in the Traffic Manual. Any modifications to the permittee's entrance necessary to accommodate signalization (including necessary easement(s) on private property) shall be the responsibility of the permittee, at no expense to the Department. (This applies only to Entrance Permits.)

3. The said encroachment will not infringe on the frontage rights of an abutting owner without written consent of the said owner as hereto: "I (we) consent to the granting of attached permit."  
Date \_\_\_\_\_ (This does not apply to utilities which serve the general public.)

4. Any permit granted hereunder shall be with the full understanding that it shall not interfere with any similar rights or permits heretofore granted to any other party except as otherwise provided by law.

5. A plan prepared by HMB, Inc. and dated May, 1999 is attached hereto and made a part hereof, which describes the facilities to be constructed by the permittee for which facilities this permit is granted. The permittee agrees as a condition to the issuance of the permit to construct and maintain such facilities in accordance with said plan, and the permittee shall not use the facilities authorized herein in any manner contrary to that prescribed by this permit and plan. Normal usage and routine maintenance only are authorized under this permit.

6. Permittee shall comply with the Manual on Uniform Traffic Control Devices as revised to and in effect on the date of the issuance of this permit which is made a part hereof by reference.

7. Permittee shall at all times from date when work is first commenced and until such time as all facilities are removed from the right-of-way premise, defend, protect, and save harmless the Department from all liability, claims, and demands arising out of work undertaken by the permittee pursuant to this permit, due to any negligent act or omission by the permittee, its servants, agents, employees, or contractors. This provision shall not inure to the benefit of any third party or operate to enlarge any liability of the Department beyond that existing at common law if this right to indemnity did not exist.

8. Upon a violation of any of the provisions of this permit, the Department may revoke the permit by giving notice to the permittee in writing to remove from the right-of-way any facilities placed thereon within a reasonable time as set forth in the notice, and in the event said facilities are not so removed, and the right-of-way restored the Department may cause same to be removed, and the costs thereof shall be charged to the permittee.

9. The permittee, his successors and assigns shall use the encroachment premises in compliance with all Federal requirements imposed pursuant to the provisions of the Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000-1) and regulations of the U.S. Department of Transportation as set forth in Title 49 C.F.R., Part 21, and as said regulations may be amended.

10. Permittee agrees that in the event it should become necessary, as may be reasonably determined by the Department, for the facilities covered by this permit to be removed or relocated in connection with the reconstruction, relocation, or improvement of the abutting highway, the Department may revoke this permit and require removal or relocation by the permittee at his own expense according and pursuant to the procedures provided in Paragraph 8 above except in those cases where the Department is required by law to pay any or all the same.

11. The permittee understands and agrees that this permit is personal to the permittee and shall not inure to his successors and assigns without the written approval of the Department that he is bound by the provisions of this permit as long as the encroachment exists unless a written release has been obtained from the Department. (Does not apply to utilities serving the general public.)

12. If the work authorized by this permit is on a project in the construction phase, it shall be the responsibility of the permittee to make personal contact with Resident Engineer on the project to coordinate the permitted work with the State's prime contractor on the project.

13. This permit does not alleviate any requirements of any other government agency.

14. Permittee agrees to keep the priority route in which this permit was issued clear of dirt, mud, and debris during construction and for the life of this permit.

THE UNDERSIGNED APPLICANT (being duly authorized representative/owner) DOES AGREE TO ALL TERMS AND CONDITIONS SET FORTH HEREIN.

January 1st  July 1st, ~~XX~~ 2001

May 28, 1999 Date

Teri Shan Signature

RECOMMENDED FOR APPROVAL

Permit Engineer Title

John Alcala Signature

PE Chief District Engineer

Shirley D. Smith Signature 6/18, 1999 Date

PRIVATE ENTRANCE: TO BE COMPLETED BY PERSONNEL INSTALLING FACILITY.

Installed By: \_\_\_\_\_

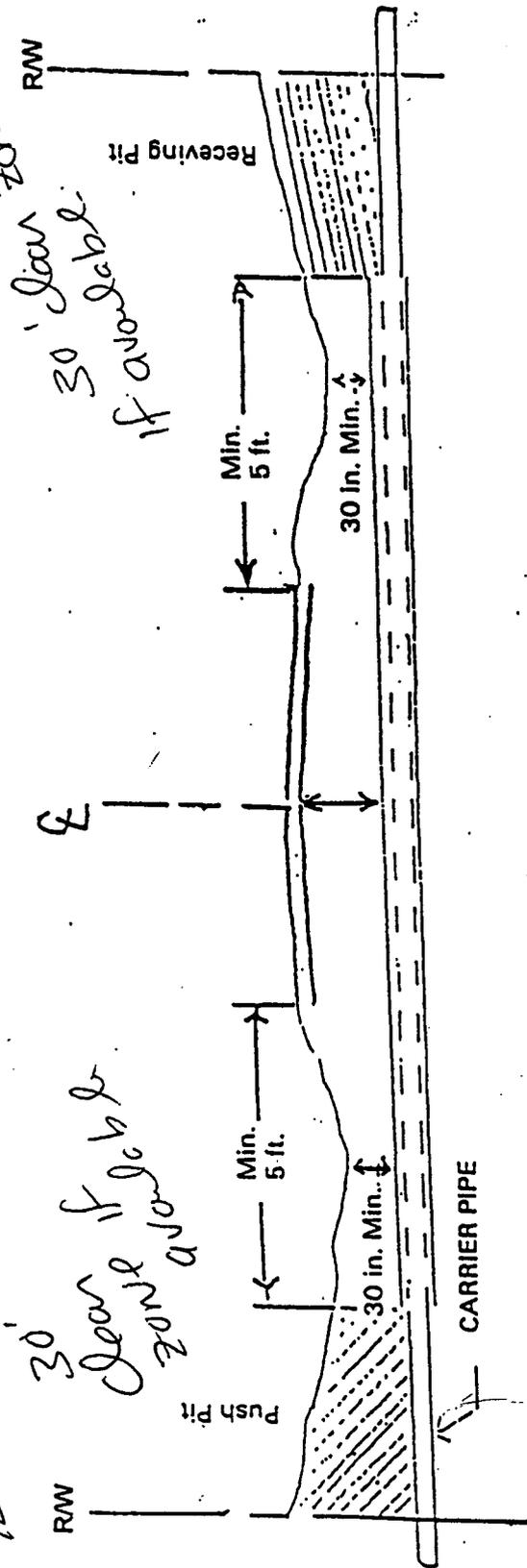
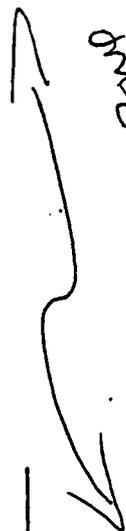
\_\_\_\_\_  
Title \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

**Typical Highway Boring Crossing Detail**

Permit No. 229 MD 5.9

Route No. 229 MD 5.9

Pavement Width \_\_\_\_\_



1. Push Pit and Receiving Pit to be backfilled and thoroughly compacted.
2. All Ditch Lines to be left open.
3. Seed and straw all areas disturbed by this work.

Services over 2" to be encased or exempt under Chapter 2 of the Permits Guidance Manual



Commonwealth of Kentucky  
**Transportation Cabinet**

Department of Highways, District Four  
634 East Dixie, P.O. Box 309  
Elizabethtown, KY 42702-0309  
502/766-5066 (Fax) 502/766-5069

James C. Codell, III  
Secretary of Transportation

T. Kevin Flanery  
Deputy Secretary

Paul E. Patton  
Governor

June 16, 1999

GRAYSON COUNTY WATER DISTRICT  
POST OFFICE BOX 1118  
BOWLING GREEN, KY 42101

SUBJECT: Grayson County, RS-43-2778-3.3  
KY 2778 ()  
Permit Number 04-0344-99

Dear SHAW KEVIN:

Your application for an encroachment permit has been approved by the Department of Highways. We are returning two copies of the approved permit so one may be kept in your record files. The other copy must be given to the party responsible for completing the project and must be kept at the jobsite at all times.

Please see that the work is done in strict conformity with the permit and any other applicable conditions (See Form TC99-21 and any other attached documents, conditions or specifications). The work should be completed no later than January 1, 2001. When the permitted work and any necessary restoration have been completed please notify this office by using the attached form which will serve as notification for final inspection.

If there are any questions regarding this permit, please do not hesitate to contact John A. Wallace  
at 502-766-5066 or fax number 502-766-5069.

Sincerely,

*John A. Wallace*  
for

S, R, Smith  
Chief District Engineer  
Department of Highways  
District 4 -Elizabethtown  
Post Office Box 309  
Elizabethtown, KY 42702-0309

NOTICE OF COMPLETION OF ENCROACHMENT PERMIT WORK

Please return this form to the District Office when work is completed and ready for final inspection.

Applicant Identification

Name: GRAYSON COUNTY WATER DISTRICT

Contact Person: SHAW KEVIN

Address: POST OFFICE BOX 1118

City: BOWLING GREEN

State: KY Zip: 42101

Telephone: 502-842-0052

Project Identification

Permit Number: 04-0344-99

County: Grayson

Route Number: 2778

Road Name:

Milepoint: 3.3

I wish to notify the Department of Highways that the above mentioned permit work and any necessary right of way restoration have been completed and are ready for final inspection.

Applicant

Please Return To:

Department of Highways  
District 4 Elizabethtown  
Post Office Box 309  
Elizabethtown, Ky. 42702-0309

Attention:

John A. Wallace

KENTUCKY TRANSPORTATION CABINET  
Department of Highways  
Permits Branch

TC 99-1  
Rev. 7/95

Released Date \_\_\_\_\_

**ENCROACHMENT PERMIT**

PERMIT NO. 04-0344-95

<b>APPLICANT IDENTIFICATION:</b> NAME: <u>Grayson County Water District</u> CONTACT PERSON: <u>Kevin Shaw</u> ADDRESS: <u>113 South Lee Avenue P.O. Box 217</u> CITY: <u>Leitchfield</u> STATE: <u>KY</u> ZIP CODE: <u>42755-0217</u> PHONE: area code ( <u>502</u> ) <u>259-3161</u>		<b>PROJECT IDENTIFICATION:</b> ACCESS CONTROL <input checked="" type="checkbox"/> By Permit <input type="checkbox"/> Partial <input type="checkbox"/> Full COUNTY: <u>Grayson</u> PRIORITY ROUTE NO: <u>KY 2778</u> MILEPOINT: <u>3.3</u> <input type="checkbox"/> Left <input type="checkbox"/> Right <input checked="" type="checkbox"/> X-ing PROJECT STATUS: <input checked="" type="checkbox"/> Maint. <input type="checkbox"/> Const. <input type="checkbox"/> Design PROJECT # STATE: <u>RS 093 2778 003-0091</u> PROJECT # FEDERAL: _____ ROAD/ STREET NAME: _____	
---	--	---	--

<b>TYPE OF ENCROACHMENT:</b> <input type="checkbox"/> COMMERCIAL ENTRANCE - BUSINESS <input type="checkbox"/> PRIVATE ENTRANCE: <input type="checkbox"/> Single Family <input type="checkbox"/> Farm <input checked="" type="checkbox"/> UTILITY: <input type="checkbox"/> Overhead <input checked="" type="checkbox"/> Underground <input type="checkbox"/> GRADE: <input type="checkbox"/> Fill <input type="checkbox"/> Landscape on R/W <input type="checkbox"/> AIRSPACE: <input type="checkbox"/> Agreement <input type="checkbox"/> Lease <input type="checkbox"/> OTHER: (Specify) _____ _____ _____		<b>ATTACHMENTS:</b> <input type="checkbox"/> Standard Drawings (List on TC 99-21 under Misc.) <input checked="" type="checkbox"/> Applicant's Plans <input type="checkbox"/> Highway Plan and Profile Sheets <input type="checkbox"/> TC 99-3 (Ponding Encroachment Specs. & Conditions) <input type="checkbox"/> TC 99-4 (Rest Area Usage Specs. & Conditions) <input type="checkbox"/> TC 99-5 (Tree Cutting/Trimming Specs. & Conditions) <input type="checkbox"/> TC 99-6 (Chemical Use of Specs. & Conditions) <input checked="" type="checkbox"/> TC 99-10 (Typical Hwy. Boring Crossing Detail) <input type="checkbox"/> TC 99-12 (Overhead Utility Encroachment Diagram) <input type="checkbox"/> TC 99-13 (Surface Restoration Methods) <input checked="" type="checkbox"/> TC 99-21 (Encroachment Permit General Notes & Specs.) <input type="checkbox"/> TC 99-22 (Agreement for Services to be Performed) <input type="checkbox"/> TC 99-23 (Mass Transit Shelter Specs. & Conditions) <input type="checkbox"/> Other Attachments (Specify): _____ _____ _____	
--	--	--	--

<b>TYPE OF INDEMNITY:</b> <input checked="" type="checkbox"/> Bond <input type="checkbox"/> Cash <input type="checkbox"/> SELF-INSURED AMOUNT ENCUMBERED \$ <u>2,000</u> <input type="checkbox"/> OTHER _____		<b>NAME AND ADDRESS OF LOCAL INSURANCE AGENCY OR SELF-INSURED REPRESENTATIVE:</b> <u>Smith Manus 3912466-118</u>	
---	--	--	--

INDEMNITY: The applicant, in order to secure this obligation, has deposited with the Transportation Cabinet as a guarantee of conformance with the Department's Encroachment Permit requirements, an indemnity in the amount of \$ \_\_\_\_\_ as determined by the Department. It shall be the responsibility of the applicant or permittee, his heirs and assignees to keep all indemnities in full force until construction or reconstruction has been completed and duly accepted by an authorized agent of the Transportation Cabinet, Department of Highways.

BRIEF DESCRIPTION OF WORK TO BE DONE: (If private entrance, show sketch with pipe location. Separate attached drawings required for encroachments other than private entrances.) This project is to provide water service for residents in Grayson County, Kentucky. See Applicants plan sheets attached

Bore @ MP 3.3 See plans

IMPORTANT (PLEASE READ): Applicant  does  does not intend to apply for excess R/W

When the work is completed in accordance with the terms of this encroachment permit, your indemnity will be released. However, the permit is effective until revoked by the Transportation Cabinet and the terms on the permit accompanying permit documents and drawings remain in effect as long as the encroachment exists. **FUTURE MAINTENANCE OF THE ENCROACHMENT IS THE RESPONSIBILITY OF THE PERMITTEE.** It is important that you understand the requirements of this encroachment permit application and accompanying documents. If you have not done so it is suggested that you review these documents and place the permit package in a safe place for future reference.

A copy of this permit and all documents shall be given to your contractor and shall be readily available at the work site for the encroachment permit inspector to review at all times. Failure to meet this requirement may result in cancellation of this permit.

IN THE EVENT THIS APPLICATION IS APPROVED, THIS DOCUMENT SHALL CONSTITUTE A PERMIT FOR THE APPLICANT TO USE THE RIGHT-OF-WAY, BUT ONLY IN THE MANNER AUTHORIZED BY THIS DOCUMENT AND REGULATIONS OF THE DEPARTMENT AND THE DRAWINGS, PLANS, ATTACHMENTS, AND OTHER PERTINENT DATA ATTACHED HERETO AND MADE A PART HEREOF.

**ENCROACHMENT PERMIT GENERAL NOTES & SPECIFICATIONS**

**I. SAFETY**

**A. General Requirements**

- All signs and control of traffic shall be in accordance with the Manual on Uniform Traffic Control Devices for Streets and Highways, latest edition, Part VI, and safety requirements shall comply with the Permits Manual.
- All work necessary in shoulder or ditchline areas of a state highway is to be scheduled to be promptly completed so that hazards adjacent to the traveled-way are kept to an absolute minimum.
- No more than one (1) traveled-lane is to be blocked or obstructed during normal working hours. All signs and flagmen during lane closure shall conform to the Manual on Uniform Traffic Control Devices.
- When it is necessary to block one (1) traveled-lane of a state highway, the normal working hours shall be as directed by the Department. No lanes are to be blocked or obstructed during adverse weather conditions (i.e., rain, snow, fog, etc.) without specific permission from Department. Working hours shall be between \_\_\_\_\_ and \_\_\_\_\_.
- The traveled-way and shoulders shall be kept clear of mud and other construction debris at all times during construction of the permit facility.
- No nonconstruction equipment or vehicles or office trailers will be allowed on the right-of-way during working hours.
- The right-of-way shall be left free and clear of equipment, material, and vehicles during non-working hours.

**B. Explosives**

- No explosive devices or explosive material shall be used within state right-of-way without proper license and approval of Kentucky Department of Mines and Minerals, Explosive Division.

**C. Other Safety Requirements**

**II. UTILITIES**

- \*All work necessary within the right-of-way shall be behind a temporary fence erected prior to a boring operation.
- \*The temporary woven wire fence shall be removed immediately upon completion of work on the right-of-way and control of access immediately restored to original condition, in accordance with applicable Kentucky Department of Highways Standard Drawings.
- \*All vents, valves, manholes, etc. are to be located outside the right-of-way.
- \*Encasement pipe shall extend from right-of-way line to right-of-way line and shall be one continuous run of pipe. The encasement pipe shall be welded at all joints.
- The boring pit and tail ditch shall extend past the existing toe of slope or bottom of ditch line and shall be a minimum of 30" deep.
- Encasement pipe shall conform to current standards for highway crossings in accordance with the Permits Manual.
- Parallel lines shall be constructed between back slope of ditch line and right-of-way line and shall have a minimum of 30" cover above top of pipe or conduit. (30" preferred)
- All pavement cuts shall be restored per Kentucky Transportation Cabinet Form No. TC 99-13.
- Aerial crossing of this utility line shall have a minimum clearance of \_\_\_\_\_ feet from the high point of the roadway to the low point of line (calculated at the coefficient for expansion of 120 degrees Fahrenheit).
- The 30' clear zone requirement will be met to the extent possible in accordance with Chapter 99-02.0313 of the Permits Manual.
- Special Requirements:

**II. GENERAL**

**A. OSHA**

Kentucky Occupational Safety and Health Standards for the construction industry which has the effect of law states in part: (Page 52 1926.651 Specific Excavation Requirements) "Prior to opening an excavation, effort shall be made to determine whether underground installations: i.e., sewer, telephone, water, fuel, electric lines, etc., will be encountered, and if so, where such underground installations are located. When the excavation approaches the estimated location of such an installation, the exact location shall be determined and when it is uncovered, proper supports shall be provided for the existing installation. Utility companies shall be contacted and advised of proposed work prior to the start of actual excavation."

**B. Archaeological**

Whenever materials of an archaeological nature are discovered during the course of construction work or maintenance operations, contact shall be made immediately with the Division of Environmental Analysis which maintains an archaeologist on its staff, or with the Office of the State Archaeologist located at the University of Kentucky. Following this consultation, further action shall be decided on a case-by-case basis by the State Highway Engineer or the Transportation Planning Engineer or their designated representative.

**C. Utilities in the Work Areas**

The permittee is to be responsible for any damage to existing utilities and any utility modifications or relocations within State right-of-way necessary, as determined by the Department or by the owner of the utility, are to be at the expense of the permittee and subject to the approval of the Department.

All existing manholes and valve boxes are to be adjusted to be flush with finished grade.

**IV. RIGHT-OF-WAY RESTORATION**

All disturbed portions of the right-of-way are to be restored to grass as per Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition). A satisfactory turf, as determined by the Department, is to be established by the permittee prior to release of indemnity. Sodding or seeding as follows:

- |  |   |
|--|---|
| Lawn or High Maintenance Situation       | -70% Lawn Fescue (e.g., variety - Falcon) |
|  | -30% Bluegrass or                         |
|  | 70% Lawn Rye (e.g., variety - Derby)      |
|  | 30% Bluegrass                             |
| Right-off-Way Lawn Maintenance Situation | -70% KY 31 Fescue                         |
|  | -30% Perennial Rye Grass or               |
|  | 100% KY Fescue                            |

- Two tons clean straw mulch per acre of seeding.
- Prior to seeding, the ground must be prepared in accordance with Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition).
- Substitutes for sod such as artificial turf or rocked mulch or paved areas may be acceptable if they are aesthetically pleasing.
- All ditch flow lines and all ditch side slopes are to be sodded.
- Existing concrete right-of-way markers are not to be disturbed, but if damaged in any way, they are to be entirely replaced by the permittee with new concrete markers to match the original markers, in accordance with Kentucky Department of Highways Standard Drawings. Markers which are entirely removed are to be re-established in the proper locations by the permittee and to the satisfaction of the Department.
- Other right-of-way restoration requirements are as follows:

**V. DRAINAGE**

- All pipe is to be laid in a straight alignment, to proper grades, and with all materials and methods of installation including bedding and joint seating in accordance with Department Standard Specifications for Road and Bridge Construction, latest edition. Pipe is not to be covered until inspected by the Department and express permission obtained to make backfill.
- All gutter lines at the base of new curbs are to be on continuous grades, and pockets of water along curbs, or in entrance areas or other paved areas within the right-of-way, are not acceptable.
- All drainage structures and appurtenances (manholes, catch basins, curbing, inlet basins, etc.) shall conform to Department specifications and shall be constructed in accordance with the Department Standard Drawings. Type required:

**VI. PAVING**

- No bituminous pavement is to be installed within the right-of-way between November 15 and April 1, nor when the temperature is below 40°F, without the express consent of the Department. No bituminous pavement is to be installed when the underlying course is wet.
- Paving within the right-of-way shall be as follows:
  - Base (Type) \_\_\_\_\_ (Thickness) \_\_\_\_\_
  - Surface Base (Type) \_\_\_\_\_ (Thickness) \_\_\_\_\_
  - Finished Surface (Type) \_\_\_\_\_ (Thickness) \_\_\_\_\_
- Existing pavement and shoulder material shall be removed to accommodate the above paving specifications.
- The finished surface of all new pavement within the right-of-way shall be true to the required slope and grade, uniform in density and texture, free of irregularities, and equivalent in riding qualities to the adjacent highway pavement or as determined by the Department of Highways.
- All materials and methods of construction, including base and subgrade preparation, shall be in accordance with Kentucky Department of Highways Specifications for Road and Bridge Construction, latest edition.
- 24 hours notice to the Department is required prior to beginning paving operations:
 

Phone: \_\_\_\_\_ Name \_\_\_\_\_
- To insure proper surface drainage the new pavement is to be flush with the edge of existing highway pavement and is to slope away from the existing edge of the pavement as specified on drawings.
- Existing edge of pavement shall be saw cut to provide a straight and uniform joint for new pavement. An approved joint sealer, in accordance with Kentucky Department of Highways Standard Specifications (latest edition) shall be applied between new and existing pavement.

**VII. SIDEWALKS SPECIFICATIONS**

**A. New Sidewalks**

- Sidewalks are to be constructed of Class A concrete (3,500 p.s.i. test), are to be \_\_\_\_\_ feet in width, are to be 6" in thickness across the bituminous entrance and 4" in thickness across the remaining sections.
- Sidewalks are to have tooled joints, not less than 1" in depth at four (4) foot intervals, and ½ preformed expansion joints extending entire through the sidewalk at intervals not to exceed fifty (50) feet.

\* This dimension should be equal to the width of the sidewalk

- All materials and methods of construction, including curing, is to be in accordance with Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, latest edition.

**B. Existing Sidewalks**

- (Applicable if existing sidewalks are being relocated) Use of the sidewalk is not to be blocked or obstructed, and a usable walkway is to be maintained across the construction area at all times.
- All damaged sections of the sidewalks are to be entirely replaced to match existing sections.

**VIII. DENSE GRADED SHOULDERS**

- Any existing dense graded aggregate shoulders in the entire frontage within the construction area, which have been disturbed, damaged, on which dirt has been placed or mud is deposited or tracked, are to be restored to original condition by removal of all contaminated material and replaced to proper grade with new dense graded aggregate.
- All new aggregate shoulders as specified on the plan are to consist of 5" compacted dense graded aggregate 2½ pounds per square yard calcium chloride.
- All dense graded aggregate shoulders are to slope away from the new edge of pavement at the rate of ¼" per foot.

**IX. CURBING**

**A. Bituminous Curbs**

- Bituminous concrete curbs shall be given a paint coat of asphalt emulsion.
- The surface under the bituminous concrete curb shall be tacked with asphalt emulsion.
- All bituminous concrete curbs shall be constructed of a Class I bituminous concrete mixture as specified by official Department of Highway specifications.
- All bituminous curbs shall be of the rolled curb type with a minimum base width of 8" and a minimum height of \_\_\_\_\_ inches. The top of the curb shall be constructed in such a manner as to guarantee a uniform rolled effect throughout the entire run.

**B. Concrete Curbs**

- All curbs or curb and gutter are to be constructed of Class A concrete (3,500 p.s.i. test) and are to be uniform in height, width, and alignment, true to grade and satisfactory in finish and appearance as determined by the Department. All materials and methods of construction, including curing, is to be in accordance with Department of Highways Standard Specifications for Road and Bridge Construction, latest edition.
- All concrete curbs are to be 6" in width, extend \_\_\_\_\_ " above finished grade and 12" below finished grade, with all visible edge rounded to 1/2" radii.
- All concrete curbs shall have expansion joints constructed at intervals of not more than 30 feet and 1/2" premolded expansion joint material (cut to conform to the curb or to the curb and gutter section) shall be used in each expansion joint.
- The last \_\_\_\_\_ feet of all concrete curbs are to be tapered down to finish grade.

**C. RIGHT-OF-WAY FENCE REPLACEMENT**

- The replacement fence shall be a height of at least 48" and shall be of sufficient density to contain all animals. (If applicable)
  - The replacement fence shall be a minimum of one foot (1') and a maximum of two feet (2') outside the right-of-way line.
  - The fence materials and design shall meet accepted industry standards and be treated as paintable.
  - The permittee shall be required to maintain the fence in a high state of repair.
  - The existing fence shall be removed by permittee and stored at Department's maintenance storage yard for future reuse by the Department.
  - The control of access shall not be diminished as a result of replacement of the fence.
  - Miscellaneous:
- 
- 
- 
- 

**NOTICE TO PERMITTEE**

THE PERMITTEE AGREES THAT ALL WORK WITHIN THE EXISTING RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE PLANS AS APPROVED AND PERMITTED BY AN ENCROACHMENT PERMIT, ANY CHANGES OR VARIANCES MADE AT THE TIME OF CONSTRUCTION WITHOUT WRITTEN APPROVAL FROM THE DEPARTMENT OF HIGHWAYS SHALL BE REMOVED BY THE PERMITTEE AT NO EXPENSE TO THE DEPARTMENT OF HIGHWAYS AND SHALL BE REDONE TO CONFORM WITH THE APPROVED PLANS.

the permittee agrees to the following terms and conditions:

- The permittee shall comply with and is bound by the requirements of the Department's Permits Manual as revised to and in effect on the date of the issuance of this permit which is made a part hereof by reference.
- Permittee agrees that if the Department determines that vehicular capacity deficiencies or over capacity conditions develop as a result of the installation and use of this facility, the permittee shall adjust, relocate, or reconstruct the facilities and/or provide and bear the expenses for signs, storage lanes, or other corrective measures reasonably deemed necessary by the Department and as set forth in the Department's Permit Manual within a reasonable length of time after receipt of written notice regarding such adjustments, relocation, additions, modifications, and/or corrective measures, such time to be specified in the notice. In cases where traffic signals are permitted or required, as determined by the Department, the costs for signal equipment and installation(s) shall be borne by the permittee and/or the Department in accordance with Department policy then in force as set forth in the Traffic Manual. Any modifications to the permittee's entrance necessary to accommodate signalization (including necessary easement(s) on private property) shall be the responsibility of the permittee, at no expense to the Department. (This applies only to Entrance Permits.)

3. The said encroachment will not infringe on the frontage rights of an abutting owner without written consent of the said owner as hereinafter: "I (we) consent to the granting of attached permit."  
Date \_\_\_\_\_ (This does not apply to utilities which serve the general public.)

4. Any permit granted hereunder shall be with the full understanding that it shall not interfere with any similar rights or permits heretofore granted to any other party except as otherwise provided by law.  
5. A plan prepared by HMB, INC. and dated May, 1999 is attached hereto and made a part hereof, which describes the facilities to be constructed by the permittee for which facilities this permit is granted. The permittee agrees as a condition to the issuance of the permit to construct and maintain such facilities in accordance with said plan, and the permittee shall not use the facilities authorized herein in any manner contrary to that prescribed by this permit and plan. Normal usage and routine maintenance only are authorized under this permit.

6. Permittee shall comply with the Manual on Uniform Traffic Control Devices as revised to and in effect on the date of the issuance of this permit which is made a part hereof by reference.  
7. Permittee shall at all times from date when work is first commenced and until such time as all facilities are removed from the right-of-way premise, defend, protect, and save harmless the Department from all liability, claims, and demands arising out of work undertaken by the permittee pursuant to this permit, due to any negligent act or omission by the permittee, its servants, agents, employees, or contractors. This provision shall not inure to the benefit of any third party or operate to enlarge any liability of the Department beyond that existing at common law if this right to indemnity did not exist.

8. Upon a violation of any of the provisions of this permit, the Department may revoke the permit by giving notice to the permittee in writing to remove from the right-of-way any facilities placed thereon within a reasonable time as set forth in the notice, and in the event said facilities are not so removed, and the right-of-way restored the Department may cause same to be removed, and the costs thereof shall be charged to the permittee.

9. The permittee, his successors and assigns shall use the encroachment premises in compliance with all Federal requirements imposed pursuant to the provisions of the Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000-1) and regulations of the U.S. Department of Transportation as set forth in Title 49 C.F.R., Part 21, and as said regulations may be amended.

10. Permittee agrees that in the event it should become necessary, as may be reasonably determined by the Department, for the facilities covered by this permit to be removed or relocated in connection with the reconstruction, relocation, or improvement of the abutting highway, the Department may revoke this permit and require removal or relocation by the permittee at his own expense according and pursuant to the procedures provided in Paragraph 8 above except in those cases where the Department is required by law to pay any or all the same.

11. The permittee understands and agrees that this permit is personal to the permittee and shall not inure to his successors and assigns without the written approval of the Department that he is bound by the provisions of this permit as long as the encroachment exists unless a written release has been obtained from the Department. (Does not apply to utilities serving the general public.)

12. If the work authorized by this permit is on a project in the construction phase, it shall be the responsibility of the permittee to make personal contact with Resident Engineer on the project to coordinate the permitted work with the State's prime contractor on the project.

13. This permit does not alleviate any requirements of any other government agency.

14. Permittee agrees to keep the priority route in which this permit was issued clear of dirt, mud, and debris during construction and for the life of this permit.

THE UNDERSIGNED APPLICANT (being duly authorized representative/owner) DOES AGREE TO ALL TERMS AND CONDITIONS SET FORTH HEREIN.

January 1st  July 1st  2001

Completion Date

May 28, 1999

Date

RECOMMENDED FOR APPROVAL

Signature

Permits Engr

Title

Ken Sh

Stanley D. Smith  
Chief District Engineer

Signature

Date

PRIVATE ENTRANCE: TO BE COMPLETED BY PERSONNEL INSTALLING FACILITY.

Installed By:

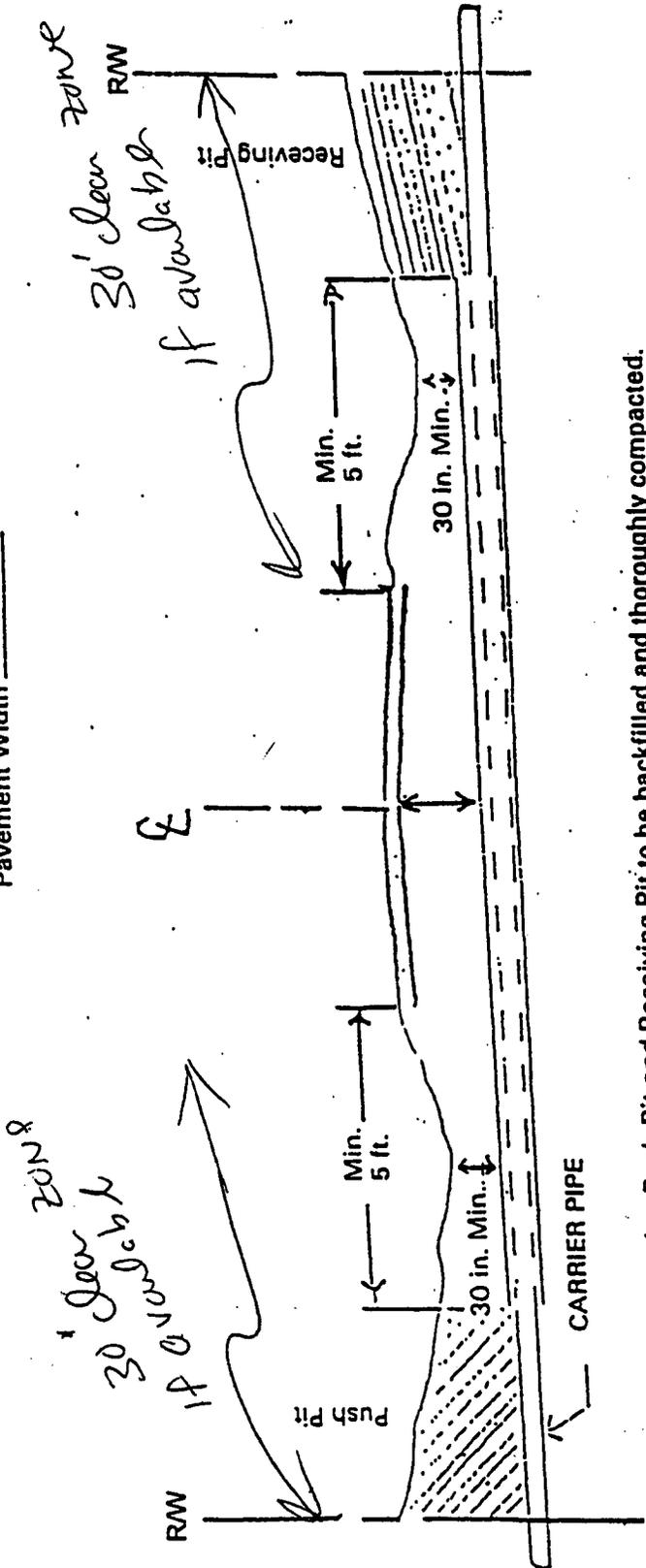
Title

Signature

Date

**Typical Highway Boring Crossing Detail**

Permit No. \_\_\_\_\_  
 Route No. 2778 MP 3.3  
 Pavement Width \_\_\_\_\_



1. Push Pit and Receiving Pit to be backfilled and thoroughly compacted.
2. All Ditch Lines to be left open.
3. Seed and straw all areas disturbed by this work.

Services over 2" to be encased or exempt under Chapter 2 of the Permits Guidance Manual



Commonwealth of Kentucky  
**Transportation Cabinet**  
Department of Highways, District Four  
634 East Dixie, P.O. Box 309  
Elizabethtown, KY 42702-0309  
502/766-5066 (Fax) 502/766-5069

James C. Codell, III  
Secretary of Transportation

T. Kevin Flanery  
Deputy Secretary

Paul E. Patton  
Governor

June 16, 1999

GRAYSON COUNTY WATER DISTRICT  
POST OFFICE BOX 1118  
BOWLING GREEN, KY 42101

SUBJECT: Grayson County, RS-43-736-9.8  
KY 736 ()  
Permit Number 04-0345-99

Dear SHAW KEVIN:

Your application for an encroachment permit has been approved by the Department of Highways. We are returning two copies of the approved permit so one may be kept in your record files. The other copy must be given to the party responsible for completing the project and must be kept at the jobsite at all times.

Please see that the work is done in strict conformity with the permit and any other applicable conditions (See Form TC99-21 and any other attached documents, conditions or specifications). The work should be completed no later than January 1, 2001. When the permitted work and any necessary restoration have been completed please notify this office by using the attached form which will serve as notification for final inspection.

If there are any questions regarding this permit, please do not hesitate to contact John A. Wallace  
at 502-766-5066 or fax number 502-766-5069.

Sincerely,

*John A. Wallace*

*for* S. R. Smith  
Chief District Engineer  
Department of Highways  
District 4 - Elizabethtown  
Post Office Box 309  
Elizabethtown, KY 42702-0309

NOTICE OF COMPLETION OF ENCROACHMENT PERMIT WORK

Please return this form to the District Office when work is completed and ready for final inspection.

---

Applicant Identification

Name: GRAYSON COUNTY WATER DISTRICT

Contact Person: SHAW KEVIN

Address: POST OFFICE BOX 1118

City: BOWLING GREEN

State: KY Zip: 42101

Telephone: 502-842-0052

Project Identification

Permit Number: 04-0345-99

County: Grayson

Route Number: 736

Road Name:

Milepoint: 9.8

---

I wish to notify the Department of Highways that the above mentioned permit work and any necessary right of way restoration have been completed and are ready for final inspection.

---

Applicant

---

Please Return To:

Department of Highways  
District 4 Elizabethtown  
Post Office Box 309  
Elizabethtown, Ky. 42702-0309

Attention:

John A. Wallace

Released Date \_\_\_\_\_

**ENCROACHMENT PERMIT**

PERMIT NO. 04-0395-90

APPLICANT IDENTIFICATION:

NAME: Grayson County Water District  
CONTACT PERSON: Kevin Shaw  
ADDRESS: 113 South Lee Avenue P.O. Box 217  
CITY: Leitchfield  
STATE: KY ZIP CODE: 42755-0217  
PHONE: area code ( 502 ) 259-3161

PROJECT IDENTIFICATION:

ACCESS CONTROL  By Permit  Partial  Full  
COUNTY: Grayson PRIORITY ROUTE NO: KY. 736  
MILEPOINT: See R/W Summary 9-8  Left  Right  X-ing  
PROJECT STATUS:  Maint.  Const.  Design  
PROJECT # STATE: BS 043 0736 009-019  
PROJECT # FEDERAL: \_\_\_\_\_  
ROAD/ STREET NAME: \_\_\_\_\_

TYPE OF ENCROACHMENT:

- COMMERCIAL ENTRANCE - BUSINESS
- PRIVATE ENTRANCE:  Single Family  Farm
- UTILITY:  Overhead  Underground
- GRADE:  Fill  Landscape on R/W
- AIRSPACE:  Agreement  Lease
- OTHER: (Specify) \_\_\_\_\_

ATTACHMENTS:

- Standard Drawings (List on TC 99-21 under Misc.)
- Applicant's Plans
- Highway Plan and Profile Sheets
- TC 99-3 (Ponding Encroachment Specs. & Conditions)
- TC 99-4 (Rest Area Usage Specs. & Conditions)
- TC 99-5 (Tree Cutting/Trimming Specs. & Conditions)
- TC 99-6 (Chemical Use of Specs. & Conditions)
- TC 99-10 (Typical Hwy. Boring Crossing Detail)
- TC 99-12 (Overhead Utility Encroachment Diagram)
- TC 99-13 (Surface Restoration Methods)
- TC 99-21 (Encroachment Permit General Notes & Specs.)
- TC 99-22 (Agreement for Services to be Performed)
- TC 99-23 (Mass Transit Shelter Specs. & Conditions)
- Other Attachments (Specify): \_\_\_\_\_

TYPE OF INDEMNITY:

Bond  Cash

SELF-INSURED AMOUNT ENCUMBERED \$ \_\_\_\_\_

OTHER 14,000

NAME AND ADDRESS OF LOCAL INSURANCE AGENCY OR SELF-

INSURED REPRESENTATIVE: Smith Mann 3912966-118

INDEMNITY: The applicant, in order to secure this obligation, has deposited with the Transportation Cabinet as a guarantee of conformance with the Department's Encroachment Permit requirements, an indemnity in the amount of \$ \_\_\_\_\_ as determined by the Department. It shall be the responsibility of the applicant or permittee, his heirs and assignees to keep all indemnities in full force until construction or reconstruction has been completed and duly accepted by an authorized agent of the Transportation Cabinet, Department of Highways.

BRIEF DESCRIPTION OF WORK TO BE DONE: (If private entrance, show sketch with pipe location. Separate attached drawings required for encroachments other than private entrances.) This project is to provide water service for residents in Grayson County, Kentucky. See Applicants plan sheets attached

ROAD BORES ON 736 at MP's 9.8, 13.5, 14.0, 14.3, 14.9, 16.0, 18.2  
Water Line on RLW 300' See plans contract 1 & 2

IMPORTANT (PLEASE READ): Applicant  does  does not intend to apply for excess R/W

When the work is completed in accordance with the terms of this encroachment permit, your indemnity will be released. However, the permit is effective until revoked by the Transportation Cabinet and the terms on the permit accompanying permit documents and drawings remain in effect as long as the encroachment exists. **FUTURE MAINTENANCE OF THE ENCROACHMENT IS THE RESPONSIBILITY OF THE PERMITTEE.** It is important that you understand the requirements of this encroachment permit application and accompanying documents. If you have not done so, it is suggested that you review these documents and place the permit package in a safe place for future reference.

A copy of this permit and all documents shall be given to your contractor and shall be readily available at the work site for the encroachment permit inspector to review at all times. Failure to meet this requirement may result in cancellation of this permit.

IN THE EVENT THIS APPLICATION IS APPROVED, THIS DOCUMENT SHALL CONSTITUTE A PERMIT FOR THE APPLICANT TO USE THE RIGHT-OF-WAY, BUT ONLY IN THE MANNER AUTHORIZED BY THIS DOCUMENT AND REGULATIONS OF THE DEPARTMENT AND THE DRAWINGS, PLANS, ATTACHMENTS, AND OTHER PERTINENT DATA ATTACHED HERETO AND MADE A PART HEREOF

PERMIT NO. \_\_\_\_\_

KENTUCKY TRANSPORTATION CABINET  
Department of Highways  
Permits Branch

Rev. 3/80

**ENCROACHMENT PERMIT GENERAL NOTES & SPECIFICATIONS**

**I. SAFETY**

**A. General Requirements**

- All signs and control of traffic shall be in accordance with the Manual on Uniform Traffic Control Devices for Streets and Highways, 4th edition, Part VI, and safety requirements shall comply with the Permits Manual.
- All work necessary in shoulder or ditchline areas of a state highway is to be scheduled to be promptly completed so that hazards adjacent to the traveled-way are kept to an absolute minimum.
- No more than one (1) traveled-lane is to be blocked or obstructed during normal working hours. All signs and flagmen during lane closure shall conform to the Manual on Uniform Traffic Control Devices.
- When it is necessary to block one (1) traveled-lane of a state highway, the normal working hours shall be as directed by the Department of Highways. No lanes are to be blocked or obstructed during adverse weather conditions (i.e., rain, snow, fog, etc.) without specific permission from the Department. Working hours shall be between \_\_\_\_\_ and \_\_\_\_\_.
- The traveled-way and shoulders shall be kept clear of mud and other construction debris at all times during construction of the project facility.
- No nonconstruction equipment or vehicles or office trailers will be allowed on the right-of-way during working hours.
- The right-of-way shall be left free and clear of equipment, material, and vehicles during non-working hours.

**B. Explosives**

- No explosive devices or explosive material shall be used within state right-of-way without proper license and approval of Kentucky Department of Mines and Minerals, Explosive Division.

**C. Other Safety Requirements**

- 
- 
- 
- 

**II. UTILITIES**

- \*All work necessary within the right-of-way shall be behind a temporary fence erected prior to a boring operation.
  - \*The temporary woven wire fence shall be removed immediately upon completion of work on the right-of-way and control of access immediately restored to original condition, in accordance with applicable Kentucky Department of Highways Standard Drawings.
  - \*All vents, valves, manholes, etc. are to be located outside the right-of-way.
  - \*Encasement pipe shall extend from right-of-way line to right-of-way line and shall be one continuous run of pipe. The encasement pipe shall be welded at all joints.
  - The boring pit and tail ditch shall extend past the existing toe of slope or bottom of ditch line and shall be a minimum of 30" deep.
  - Encasement pipe shall conform to current standards for highway crossings in accordance with the Permits Manual.
  - Parallel lines shall be constructed between back slope of ditch line and right-of-way line and shall have a minimum of 30 " cover above top of pipe or conduit. (30" preferred)
  - All pavement cuts shall be restored per Kentucky Transportation Cabinet Form No. TC 99-13.
  - Aerial crossing of this utility line shall have a minimum clearance of \_\_\_\_\_ feet from the high point of the roadway to the low point of line (calculated at the coefficient for expansion of 120 degrees Fahrenheit).
  - The 30' clear zone requirement will be met to the extent possible in accordance with Chapter 99-02.0313 of the Permits Manual.
  - Special Requirements:
- 
- 
- 

\*Applies to Fully Controlled Access Highways ONLY

**OSHA**

Kentucky Occupational Safety and Health Standards for the construction industry which has the effect of law states in part: (Page 52 1926.651 Specific Excavation Requirements) "Prior to opening an excavation, effort shall be made to determine whether underground installations: i.e., sewer, telephone, water, fuel, electric lines, etc., will be encountered, and if so, where such underground installations are located. When the excavation approaches the estimated location of such an installation, the exact location shall be determined and when it is uncovered, proper supports shall be provided for the existing installation. Utility companies shall be contacted and advised of proposed work prior to the start of actual excavation."

**B. Archaeological**

Whenever materials of an archaeological nature are discovered during the course of construction work or maintenance operations, contact shall be made immediately with the Division of Environmental Analysis which maintains an archaeologist on its staff, or with the Office of the State Archaeologist located at the University of Kentucky. Following this consultation, further action shall be decided on a case-by-case basis by the State Highway Engineer or the Transportation Planning Engineer or their designated representative.

**C. Utilities in the Work Areas**

The permittee is to be responsible for any damage to existing utilities and any utility modifications or relocations within State right-of-way necessary, as determined by the Department or by the owner of the utility, are to be at the expense of the permittee and subject to the approval of the Department.

All existing manholes and valve boxes are to be adjusted to be flush with finished grade.

**IV. RIGHT-OF-WAY RESTORATION**

All disturbed portions of the right-of-way are to be restored to grass as per Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition). A satisfactory turf, as determined by the Department, is to be established by the permittee prior to release of indemnity. Sodding or seeding as follows:

Lawn or High Maintenance Situation	-70% Lawn Fescue (e.g., variety - Falcon)
	-30% Bluegrass or
	70% Lawn Rye (e.g., variety - Derby)
	30% Bluegrass
Right-off-Way Lawn Maintenance Situation	-70% KY 31 Fescue
	-30% Perennial Rye Grass or
	100% KY Fescue

Two tons clean straw mulch per acre of seeding.

Prior to seeding, the ground must be prepared in accordance with Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition).

Substitutes for sod such as artificial turf or rocked mulch or paved areas may be acceptable if they are aesthetically pleasing.

All ditch flow lines and all ditch side slopes are to be sodded.

Existing concrete right-of-way markers are not to be disturbed, but if damaged in any way, they are to be entirely replaced by the permittee with new concrete markers to match the original markers, in accordance with Kentucky Department of Highways Standard Drawings. Markers which are entirely removed are to be re-established in the proper locations by the permittee and to the satisfaction of the Department.

Other right-of-way restoration requirements are as follows:

**V. DRAINAGE**

All pipe is to be laid in a straight alignment, to proper grades, and with all materials and methods of installation including bedding and joint seating in accordance with Department Standard Specifications for Road and Bridge Construction, latest edition. Pipe is not to be covered until inspected by the Department and express permission obtained to make backfill.

All gutter lines at the base of new curbs are to be on continuous grades, and pockets of water along curbs, or in entrance areas or other paved areas within the right-of-way, are not acceptable.

All drainage structures and appurtenances (manholes, catch basins, curbing, inlet basins, etc.) shall conform to Department specifications and shall be constructed in accordance with the Department Standard Drawings. Type required:

**VI. PAVING**

- No bituminous pavement is to be installed within the right-of-way between November 15 and April 1, nor when the temperature is below 40°F, without the express consent of the Department. No bituminous pavement is to be installed when the underlying course is wet.
- Paving within the right-of-way shall be as follows:
  - Base (Type) \_\_\_\_\_ (Thickness) \_\_\_\_\_
  - Surface Base (Type) \_\_\_\_\_ (Thickness) \_\_\_\_\_
  - Finished Surface (Type) \_\_\_\_\_ (Thickness) \_\_\_\_\_
- Existing pavement and shoulder material shall be removed to accommodate the above paving specifications.
- The finished surface of all new pavement within the right-of-way shall be true to the required slope and grade, uniform in density and texture, free of irregularities, and equivalent in riding qualities to the adjacent highway pavement or as determined by the Department of Highways.
- All materials and methods of construction, including base and subgrade preparation, shall be in accordance with Kentucky Department of Highways Specifications for Road and Bridge Construction, latest edition.
- 24 hours notice to the Department is required prior to beginning paving operations:
  - Phone: \_\_\_\_\_ Name \_\_\_\_\_
- To insure proper surface drainage the new pavement is to be flush with the edge of existing highway pavement and is to slope away from the existing edge of the pavement as specified on drawings.
- Existing edge of pavement shall be saw cut to provide a straight and uniform joint for new pavement. An approved joint sealer, in accordance with Kentucky Department of Highways Standard Specifications (latest edition) shall be applied between new and existing pavement.

**VII. SIDEWALKS SPECIFICATIONS**

**A. New Sidewalks**

- Sidewalks are to be constructed of Class A concrete (3,500 p.s.i. test), are to be \_\_\_\_\_ feet in width, are to be 6" in thickness across the bituminous entrance and 4" in thickness across the remaining sections.
- Sidewalks are to have tooled joints, not less than 1" in depth at four (4) foot intervals, and ½ preformed expansion joints extending entirely through the sidewalk at intervals not to exceed fifty (50) feet.
  - \* This dimension should be equal to the width of the sidewalk
- All materials and methods of construction, including curing, is to be in accordance with Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, latest edition.

**B. Existing Sidewalks**

- (Applicable if existing sidewalks are being relocated) Use of the sidewalk is not to be blocked or obstructed, and a usable walkway is to be maintained across the construction area at all times.
- All damaged sections of the sidewalks are to be entirely replaced to match existing sections.

**VIII. DENSE GRADED SHOULDERS**

- Any existing dense graded aggregate shoulders in the entire frontage within the construction area, which have been disturbed, damaged, on which dirt has been placed or mud is deposited or tracked, are to be restored to original condition by removal of all contaminated material and replaced to proper grade with new dense graded aggregate.
- All new aggregate shoulders as specified on the plan are to consist of 5" compacted dense graded aggregate 2½ pounds per square yard calcium chloride.
- All dense graded aggregate shoulders are to slope away from the new edge of pavement at the rate of ¼" per foot.

**IX. CURBING**

**A. Bituminous Curbs**

- Bituminous concrete curbs shall be given a paint coat of asphalt emulsion.
- The surface under the bituminous concrete curb shall be tacked with asphalt emulsion.
- All bituminous concrete curbs shall be constructed of a Class I bituminous concrete mixture as specified by official Department of Highways specifications.
- All bituminous curbs shall be of the rolled curb type with a minimum base width of 8" and a minimum height of \_\_\_\_\_ inches. The top of the curb shall be constructed in such a manner as to guarantee a uniform rolled effect throughout the entire run.

**B. Concrete Curbs**

- All curbs or curb and gutter are to be constructed of Class A concrete (3,500 p.s.i. test) and are to be uniform in height, width, and alignment, true to grade and satisfactory in finish and appearance as determined by the Department. All materials and methods of construction, including curing, is to be in accordance with Department of Highways Standard Specifications for Road and Bridge Construction, latest edition.
- All concrete curbs are to be 6" in width, extend \_\_\_\_\_ " above finished grade and 12" below finished grade, with all visible edge rounded to 1/2" radii.
- All concrete curbs shall have expansion joints constructed at intervals of not more than 30 feet and 1/4" premolded expansion joint material (cut to conform to the curb or to the curb and gutter section) shall be used in each expansion joint.
- The last \_\_\_\_\_ feet of all concrete curbs are to be tapered down to finish grade.

**X. RIGHT-OF-WAY FENCE REPLACEMENT**

- The replacement fence shall be a height of at least 48" and shall be of sufficient density to contain all animals. (If applicable)
- The replacement fence shall be a minimum of one foot (1') and a maximum of two feet (2') outside the right-of-way line.
- The fence materials and design shall meet accepted industry standards and be treated as paintable.
- The permittee shall be required to maintain the fence in a high state of repair.
- The existing fence shall be removed by permittee and stored at Department's maintenance storage yard for future reuse by the Department.
- The control of access shall not be diminished as a result of replacement of the fence.
- Miscellaneous:

---

---

---

---

**NOTICE TO PERMITTEE**

THE PERMITTEE AGREES THAT ALL WORK WITHIN THE EXISTING RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE PLANS AS APPROVED AND PERMITTED BY AN ENCROACHMENT PERMIT, ANY CHANGES OR VARIANCES MADE AT THE TIME OF CONSTRUCTION WITHOUT WRITTEN APPROVAL FROM THE DEPARTMENT OF HIGHWAYS SHALL BE REMOVED BY THE PERMITTEE AT NO EXPENSE TO THE DEPARTMENT OF HIGHWAYS AND SHALL BE REDONE TO CONFORM WITH THE APPROVED PLANS.

Permittee agrees to the following terms and conditions:

The permittee shall comply with and is bound by the requirements of the Department's Permits Manual as revised to and in effect on the date of the issuance of this permit which is made a part hereof by reference. Permittee agrees that if the Department determines that vehicular capacity deficiencies or over capacity conditions develop as a result of the installation and use of this facility, the permittee shall adjust, relocate, or reconstruct the facilities and/or provide and bear the expenses for signs, storage lanes, or other corrective measures reasonably deemed necessary by the Department and as set forth in the Department's Permit Manual within a reasonable length of time after receipt of written notice regarding such adjustments, relocation, additions, modifications, and/or corrective measures, such time to be specified in the notice. In cases where traffic signals are permitted or required, as determined by the Department, the costs for signal equipment and installation(s) shall be borne by the permittee and/or the Department in accordance with Department policy then in force as set forth in the Traffic Manual. Any modifications to the permittee's entrance necessary to accommodate signalization (including necessary easement(s) on private property) shall be the responsibility of the permittee, at no expense to the Department. (This applies only to Entrance Permits.)

3. The said encroachment will not infringe on the frontage rights of an abutting owner without written consent of the said owner as hereto: "I (we) consent to the granting of attached permit."  
(This does not apply to utilities which serve the general public.)
4. Any permit granted hereunder shall be with the full understanding that it shall not interfere with any similar rights or permits heretofore granted to any other party except as otherwise provided by law.
5. A plan prepared by HMB, INC. and dated May, 1999 is attached hereto and made a part hereof, which describes the facilities to be constructed by the permittee for which facilities this permit is granted. The permittee agrees as a condition to the issuance of the permit to construct and maintain such facilities in accordance with said plan, and the permittee shall not use the facilities authorized herein in any manner contrary to that prescribed by this permit and plan. Normal usage and routine maintenance only are authorized under this permit.
6. Permittee shall comply with the Manual on Uniform Traffic Control Devices as revised to and in effect on the date of the issuance of this permit which is made a part hereof by reference.
7. Permittee shall at all times from date when work is first commenced and until such time as all facilities are removed from the right-of-way premise, defend, protect, and save harmless the Department from all liability, claims, and demands arising out of work undertaken by the permittee pursuant to this permit, due to any negligent act or omission by the permittee, its servants, agents, employees, or contractors. This provision shall not inure to the benefit of any third party or operate to enlarge any liability of the Department beyond that existing at common law if this right to indemnity did not exist.
8. Upon a violation of any of the provisions of this permit, the Department may revoke the permit by giving notice to the permittee in writing to remove from the right-of-way any facilities placed thereon within a reasonable time as set forth in the notice, and in the event said facilities are not so removed, and the right-of-way restored the Department may cause same to be removed, and the costs thereof shall be charged to the permittee.
9. The permittee, his successors and assigns shall use the encroachment premises in compliance with all Federal requirements imposed pursuant to the provisions of the Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000-1) and regulations of the U.S. Department of Transportation as set forth in Title 49 C.F.R., Part 21, and as said regulations may be amended.
10. Permittee agrees that in the event it should become necessary, as may be reasonably determined by the Department, for the facilities covered by this permit to be removed or relocated in connection with the reconstruction, relocation, or improvement of the abutting highway, the Department may revoke this permit and require removal or relocation by the permittee at his own expense according and pursuant to the procedures provided in Paragraph 8 above except in those cases where the Department is required by law to pay any or all the same.
11. The permittee understands and agrees that this permit is personal to the permittee and shall not inure to his successors and assigns without the written approval of the Department (that he is bound by the provisions of this permit as long as the encroachment exists unless a written release has been obtained from the Department. (Does not apply to utilities serving the general public.))
12. If the work authorized by this permit is on a project in the construction phase, it shall be the responsibility of the permittee to make personal contact with Resident Engineer on the project to coordinate the permitted work with the State's prime contractor on the project.
13. This permit does not alleviate any requirements of any other government agency.
14. Permittee agrees to keep the priority route in which this permit was issued clear of dirt, mud, and debris during construction and for the life of this permit.

THE UNDERSIGNED APPLICANT (being duly authorized representative/owner) DOES AGREE TO ALL TERMS AND CONDITIONS SET FORTH HEREIN.

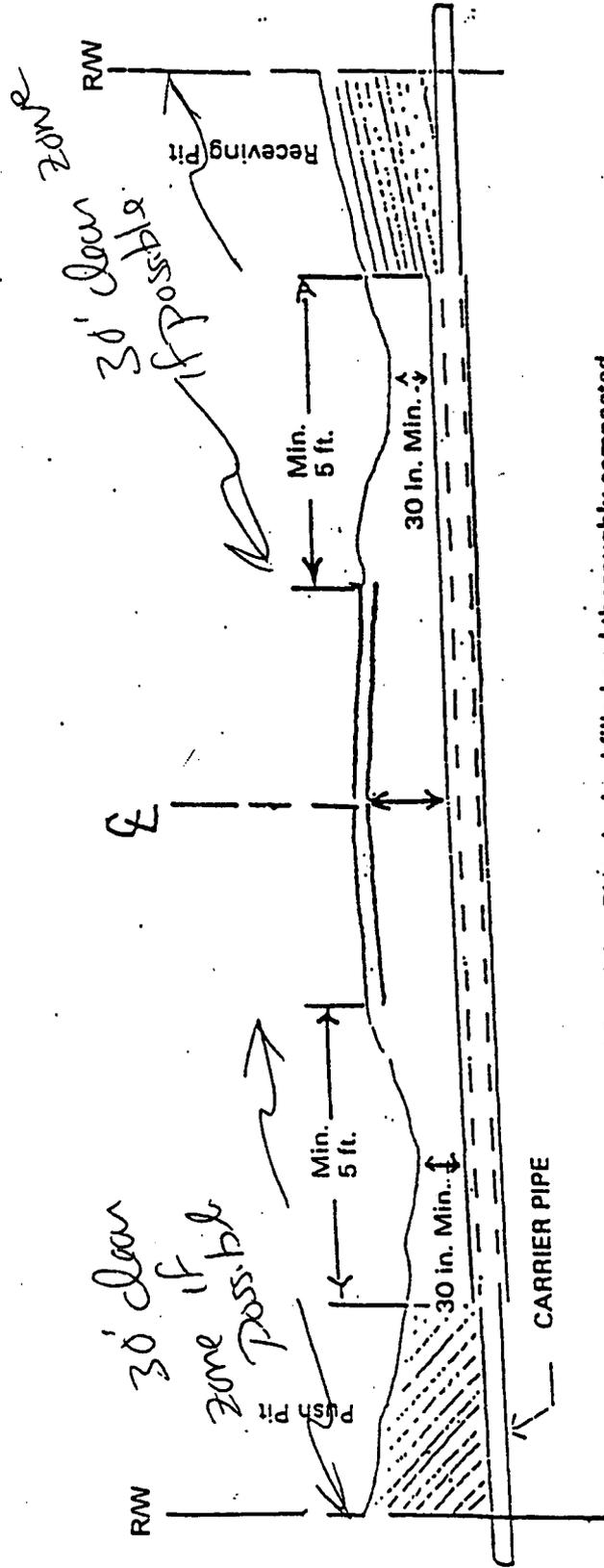
<input checked="" type="checkbox"/> January 1st	<input type="checkbox"/> July 1st	<input checked="" type="checkbox"/> 2001	
Completion Date			Date
RECOMMENDED FOR APPROVAL		<u>Permits ENHR</u>	Signature
<u>John A. Walker</u>		<u>Shirley R. Smith</u>	Chief District Engineer
Title		Signature	Date
Title		Signature	Date

PRIVATE ENTRANCE: TO BE COMPLETED BY PERSONNEL INSTALLING FACILITY.

Installed By: _____	Date _____
Title _____	Date _____

**Typical Highway Boring Crossing Detail**

Permit No. \_\_\_\_\_ VARIOUS MP'S See Permit App  
 Route No. 763  
 Pavement Width \_\_\_\_\_



1. Push Pit and Receiving Pit to be backfilled and thoroughly compacted.
2. All Ditch Lines to be left open.
3. Seed and straw all areas disturbed by this work.

Services over 2" to be encased or exempt under Chapter 2 of the Permits Guidance Manual



Commonwealth of Kentucky  
**Transportation Cabinet**

Department of Highways, District Four  
634 East Dixie, P.O. Box 309  
Elizabethtown, KY 42702-0309  
502/766-5066 (Fax) 502/766-5069

**James C. Codell, III**  
Secretary of Transportation

**T. Kevin Flanery**  
Deputy Secretary

**Paul E. Patton**  
Governor

June 16, 1999

GRAYSON COUNTY WATER DISTRICT  
POST OFFICE BOX 1118  
BOWLING GREEN, KY 42101

SUBJECT: Grayson County, MP-43-259-17.7  
KY 259 ()  
Permit Number 04-0346-99

Dear SHAW KEVIN:

Your application for an encroachment permit has been approved by the Department of Highways. We are returning two copies of the approved permit so one may be kept in your record files. The other copy must be given to the party responsible for completing the project and must be kept at the jobsite at all times.

Please see that the work is done in strict conformity with the permit and any other applicable conditions (See Form TC99-21 and any other attached documents, conditions or specifications). The work should be completed no later than January 1, 2001. When the permitted work and any necessary restoration have been completed please notify this office by using the attached form which will serve as notification for final inspection.

If there are any questions regarding this permit, please do not hesitate to contact John A. Wallace at 502-766-5066 or fax number 502-766-5069.

Sincerely,

*for* *John A. Wallace*  
S, R, Smith  
Chief District Engineer  
Department of Highways  
District 4 - Elizabethtown  
Post Office Box 309  
Elizabethtown, KY 42702-0309

NOTICE OF COMPLETION OF ENCROACHMENT PERMIT WORK

Please return this form to the District Office when work is completed and ready for final inspection.

Applicant Identification

Name: GRAYSON COUNTY WATER DISTRICT

Contact Person: SHAW KEVIN

Address: POST OFFICE BOX 1118

City: BOWLING GREEN

State: KY Zip: 42101

Telephone: 502-842-0052

Project Identification

Permit Number: 04-0346-99

County: Grayson

Route Number: 259

Road Name:

Milepoint: 17.7

I wish to notify the Department of Highways that the above mentioned permit work and any necessary right of way restoration have been completed and are ready for final inspection.

Applicant

Please Return To:

Department of Highways  
District 4 Elizabethtown  
Post Office Box 309  
Elizabethtown, Ky. 42702-0309

Attention:

John A. Wallace

KENTUCKY TRANSPORTATION CABINET  
Department of Highways  
Permits Branch

TC 99-1  
Rev. 7/95

Released Date \_\_\_\_\_

**ENCROACHMENT PERMIT**

PERMIT NO. 04-0346-9

<b>APPLICANT IDENTIFICATION:</b> NAME: <u>Grayson County Water District</u> CONTACT PERSON: <u>Kevin Shaw</u> ADDRESS: <u>113 South Lee Avenue P.O. Box 217</u> CITY: <u>Leitchfield</u> STATE: <u>KY</u> ZIP CODE: <u>42755-0217</u> PHONE: area code ( <u>502</u> ) <u>259-3161</u>	<b>PROJECT IDENTIFICATION:</b> ACCESS CONTROL <input checked="" type="checkbox"/> By Permit <input type="checkbox"/> Partial <input type="checkbox"/> Full COUNTY: <u>Grayson</u> PRIORITY ROUTE NO: <u>HWY 259</u> MILEPOINT: <u>17.7</u> <input type="checkbox"/> Left <input type="checkbox"/> Right <input checked="" type="checkbox"/> X-ing PROJECT STATUS: <input checked="" type="checkbox"/> Maint. <input type="checkbox"/> Const. <input type="checkbox"/> Design PROJECT # STATE: <u>MP 093 0259 017-019</u> PROJECT # FEDERAL: _____ ROAD/ STREET NAME: _____
---	---

<b>TYPE OF ENCROACHMENT:</b> <input type="checkbox"/> COMMERCIAL ENTRANCE - BUSINESS <input type="checkbox"/> PRIVATE ENTRANCE: <input type="checkbox"/> Single Family <input type="checkbox"/> Farm <input checked="" type="checkbox"/> UTILITY: <input type="checkbox"/> Overhead <input checked="" type="checkbox"/> Underground <input type="checkbox"/> GRADE: <input type="checkbox"/> Fill <input type="checkbox"/> Landscape on R/W <input type="checkbox"/> AIRSPACE: <input type="checkbox"/> Agreement <input type="checkbox"/> Lease <input type="checkbox"/> OTHER: (Specify) _____ _____ _____	<b>ATTACHMENTS:</b> <input type="checkbox"/> Standard Drawings (List on TC 99-21 under Misc.) <input checked="" type="checkbox"/> Applicant's Plans <input type="checkbox"/> Highway Plan and Profile Sheets <input type="checkbox"/> TC 99-3 (Ponding Encroachment Specs. & Conditions) <input type="checkbox"/> TC 99-4 (Rest Area Usage Specs. & Conditions) <input type="checkbox"/> TC 99-5 (Tree Cutting/Trimming Specs. & Conditions) <input type="checkbox"/> TC 99-6 (Chemical Use of Specs. & Conditions) <input checked="" type="checkbox"/> TC 99-10 (Typical Hwy. Boring Crossing Detail) <input type="checkbox"/> TC 99-12 (Overhead Utility Encroachment Diagram) <input type="checkbox"/> TC 99-13 (Surface Restoration Methods) <input checked="" type="checkbox"/> TC 99-21 (Encroachment Permit General Notes & Specs.) <input type="checkbox"/> TC 99-22 (Agreement for Services to be Performed) <input type="checkbox"/> TC 99-23 (Mass Transit Shelter Specs. & Conditions) <input type="checkbox"/> Other Attachments (Specify): _____ _____ _____
--	--

<b>TYPE OF INDEMNITY:</b> <input checked="" type="checkbox"/> Bond <input type="checkbox"/> Cash <input type="checkbox"/> SELF-INSURED AMOUNT ENCUMBERED \$ _____ <input type="checkbox"/> OTHER <u>9,000</u>	_____ _____ _____
---	-------------------------

NAME AND ADDRESS OF LOCAL INSURANCE AGENCY OR SELF-INSURED REPRESENTATIVE: Smith Muny 3912966-118

INDEMNITY: The applicant, in order to secure this obligation, has deposited with the Transportation Cabinet as a guarantee of conformance with the Department's Encroachment Permit requirements, an indemnity in the amount of \$ \_\_\_\_\_ as determined by the Department. It shall be the responsibility of the applicant or permittee, his heirs and assignees to keep all indemnities in full force until construction or reconstruction has been completed and duly accepted by an authorized agent of the Transportation Cabinet, Department of Highways.

BRIEF DESCRIPTION OF WORK TO BE DONE: (If private entrance, show sketch with pipe location. Separate attached drawings required for encroachments other than private entrances.) This project is to provide water service for residents in Grayson County, Kentucky. See Applicants plan sheets attached

Base @ MP 17.7 & 18.7 See Plan

IMPORTANT (PLEASE READ): Applicant  does  does not intend to apply for excess R/W

When the work is completed in accordance with the terms of this encroachment permit, your idemnity will be released. However, the permit is effective until revoked by the Transportation Cabinet and the terms on the permit accompanying permit documents and drawings remain in effect as long as the encroachment exists. **FUTURE MAINTENANCE OF THE ENCROACHMENT IS THE RESPONSIBILITY OF THE PERMITTEE.** It is important that you understand the requirements of this encroachment permit application and accompanying documents. If you have not done so it is suggested that you review these documents and place the permit package in a safe place for future reference.

A copy of this permit and all documents shall be given to your contractor and shall be readily available at the work site for the encroachment permit inspector to review at all times. Failure to meet this requirement may result in cancellation of this permit.

IN THE EVENT THIS APPLICATION IS APPROVED, THIS DOCUMENT SHALL CONSTITUTE A PERMIT FOR THE APPLICANT TO USE THE RIGHT-OF-WAY, BUT ONLY IN THE MANNER AUTHORIZED BY THIS DOCUMENT AND REGULATIONS OF THE DEPARTMENT AND THE DRAWINGS, PLANS, ATTACHMENTS, AND OTHER PERTINENT DATA ATTACHED HERETO AND MADE A PART HEREOF.

**ENCROACHMENT PERMIT GENERAL NOTES & SPECIFICATIONS**

**I. SAFETY**

**A. General Requirements**

- All signs and control of traffic shall be in accordance with the Manual on Uniform Traffic Control Devices for Streets and Highways, latest edition, Part VI, and safety requirements shall comply with the Permits Manual.
- All work necessary in shoulder or ditchline areas of a state highway is to be scheduled to be promptly completed so that hazards adjacent to the traveled-way are kept to an absolute minimum.
- No more than one (1) traveled-lane is to be blocked or obstructed during normal working hours. All signs and flagmen during lane closure shall conform to the Manual on Uniform Traffic Control Devices.
- When it is necessary to block one (1) traveled-lane of a state highway, the normal working hours shall be as directed by the Department. No lanes are to be blocked or obstructed during adverse weather conditions (i.e., rain, snow, fog, etc.) without specific permission from the Department. Working hours shall be between \_\_\_\_\_ and \_\_\_\_\_.
- The traveled-way and shoulders shall be kept clear of mud and other construction debris at all times during construction of the permitted facility.
- No nonconstruction equipment or vehicles or office trailers will be allowed on the right-of-way during working hours.
- The right-of-way shall be left free and clear of equipment, material, and vehicles during non-working hours.

**B. Explosives**

- No explosive devices or explosive material shall be used within state right-of-way without proper license and approval of Kentucky Department of Mines and Minerals, Explosive Division.

**C. Other Safety Requirements**

- 
- 
- 
- 

**II. UTILITIES**

- \*All work necessary within the right-of-way shall be behind a temporary fence erected prior to a boring operation.
  - \*The temporary woven wire fence shall be removed immediately upon completion of work on the right-of-way and control of access immediately restored to original condition, in accordance with applicable Kentucky Department of Highways Standard Drawings.
  - \*All vents, valves, manholes, etc. are to be located outside the right-of-way.
  - \*Encasement pipe shall extend from right-of-way line to right-of-way line and shall be one continuous run of pipe. The encasement pipe shall be welded at all joints.
  - The boring pit and tail ditch shall extend past the existing toe of slope or bottom of ditch line and shall be a minimum of 30" deep.
  - Encasement pipe shall conform to current standards for highway crossings in accordance with the Permits Manual.
  - Parallel lines shall be constructed between back slope of ditch line and right-of-way line and shall have a minimum of 30" cover above top of pipe or conduit. (30" preferred)
  - All pavement cuts shall be restored per Kentucky Transportation Cabinet Form No. TC 99-13.
  - Aerial crossing of this utility line shall have a minimum clearance of \_\_\_\_\_ feet from the high point of the roadway to the low point of the line (calculated at the coefficient for expansion of 120 degrees Fahrenheit).
  - The 30' clear zone requirement will be met to the extent possible in accordance with Chapter 99-02.0313 of the Permits Manual.
  - Special Requirements:
- 
- 
- 

\*Applies to Fully Controlled Access Highways **ONLY**

III. GENERAL

A. OSHA

Kentucky Occupational Safety and Health Standards for the construction industry which has the effect of law states in part: (Page 52 1926.651 Specific Excavation Requirements) "Prior to opening an excavation, effort shall be made to determine whether underground installations: i.e., sewer, telephone, water, fuel, electric lines, etc., will be encountered, and if so, where such underground installations are located. When the excavation approaches the estimated location of such an installation, the exact location shall be determined and when it is uncovered, proper supports shall be provided for the existing installation. Utility companies shall be contacted and advised of proposed work prior to the start of actual excavation."

B. Archaeological

Whenever materials of an archaeological nature are discovered during the course of construction work or maintenance operations, contact shall be made immediately with the Division of Environmental Analysis which maintains an archaeologist on its staff, or with the Office of the State Archaeologist located at the University of Kentucky. Following this consultation, further action shall be decided on a case-by-case basis by the State Highway Engineer or the Transportation Planning Engineer or their designated representative.

C. Utilities in the Work Areas

The permittee is to be responsible for any damage to existing utilities and any utility modifications or relocations within State right-of-way necessary, as determined by the Department or by the owner of the utility, are to be at the expense of the permittee and subject to the approval of the Department.

All existing manholes and valve boxes are to be adjusted to be flush with finished grade.

IV. RIGHT-OF-WAY RESTORATION

All disturbed portions of the right-of-way are to be restored to grass as per Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition). A satisfactory turf, as determined by the Department, is to be established by the permittee prior to release of indemnity. Sodding or seeding as follows:

Lawn or High Maintenance Situation	-70% Lawn Fescue (e.g., variety - Falcon)
	-30% Bluegrass or
	70% Lawn Rye (e.g., variety - Derby)
	30% Bluegrass
Right-off-Way Lawn Maintenance Situation	-70% KY 31 Fescue
	-30% Perennial Rye Grass or
	100% KY Fescue

Two tons clean straw mulch per acre of seeding.

Prior to seeding, the ground must be prepared in accordance with Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition).

Substitutes for sod such as artificial turf or rocked mulch or paved areas may be acceptable if they are aesthetically pleasing.

All ditch flow lines and all ditch side slopes are to be sodded.

Existing concrete right-of-way markers are not to be disturbed, but if damaged in any way, they are to be entirely replaced by the permittee with new concrete markers to match the original markers, in accordance with Kentucky Department of Highways Standard Drawings. Markers which are entirely removed are to be re-established in the proper locations by the permittee and to the satisfaction of the Department.

Other right-of-way restoration requirements are as follows:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

V. DRAINAGE

All pipe is to be laid in a straight alignment, to proper grades, and with all materials and methods of installation including bedding and joint seating in accordance with Department Standard Specifications for Road and Bridge Construction, latest edition. Pipe is not to be covered until inspected by the Department and express permission obtained to make backfill.

All gutter lines at the base of new curbs are to be on continuous grades, and pockets of water along curbs, or in entrance areas or other paved areas within the right-of-way, are not acceptable.

All drainage structures and appurtenances (manholes, catch basins, curbing, inlet basins, etc.) shall conform to Department specifications and shall be constructed in accordance with the Department Standard Drawings. Type required.

\_\_\_\_\_  
\_\_\_\_\_

**VI. PAVING**

- No bituminous pavement is to be installed within the right-of-way between November 15 and April 1, nor when the temperature is below 40°F, without the express consent of the Department. No bituminous pavement is to be installed when the underlying course is wet.
- Paving within the right-of-way shall be as follows:
  - Base (Type) \_\_\_\_\_ (Thickness) \_\_\_\_\_
  - Surface Base (Type) \_\_\_\_\_ (Thickness) \_\_\_\_\_
  - Finished Surface (Type) \_\_\_\_\_ (Thickness) \_\_\_\_\_
- Existing pavement and shoulder material shall be removed to accommodate the above paving specifications.
- The finished surface of all new pavement within the right-of-way shall be true to the required slope and grade, uniform in density and texture, free of irregularities, and equivalent in riding qualities to the adjacent highway pavement or as determined by the Department of Highways.
- All materials and methods of construction, including base and subgrade preparation, shall be in accordance with Kentucky Department of Highways Specifications for Road and Bridge Construction, latest edition.
- 24 hours notice to the Department is required prior to beginning paving operations:
 

Phone: \_\_\_\_\_ Name \_\_\_\_\_
- To insure proper surface drainage the new pavement is to be flush with the edge of existing highway pavement and is to slope away from the existing edge of the pavement as specified on drawings.
- Existing edge of pavement shall be saw cut to provide a straight and uniform joint for new pavement. An approved joint sealer, in accordance with Kentucky Department of Highways Standard Specifications (latest edition) shall be applied between new and existing pavement.

**VII. SIDEWALKS SPECIFICATIONS**

**A. New Sidewalks**

- Sidewalks are to be constructed of Class A concrete (3,500 p.s.i. test), are to be \_\_\_\_\_ feet in width, are to be 6" in thickness across the bituminous entrance and 4" in thickness across the remaining sections.
- Sidewalks are to have tooled joints, not less than 1" in depth at four (4) foot intervals, and ½ premolded expansion joints extending entirely through the sidewalk at intervals not to exceed fifty (50) feet.
 

\* This dimension should be equal to the width of the sidewalk
- All materials and methods of construction, including curing, is to be in accordance with Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, latest edition.

**B. Existing Sidewalks**

- (Applicable if existing sidewalks are being relocated) Use of the sidewalk is not to be blocked or obstructed, and a usable walkway is to be maintained across the construction area at all times.
- All damaged sections of the sidewalks are to be entirely replaced to match existing sections.

**VIII. DENSE GRADED SHOULDERS**

- Any existing dense graded aggregate shoulders in the entire frontage within the construction area, which have been disturbed, damaged, on which dirt has been placed or mud is deposited or tracked, are to be restored to original condition by removal of all contaminated material and replaced to proper grade with new dense graded aggregate.
- All new aggregate shoulders as specified on the plan are to consist of 5" compacted dense graded aggregate 2½ pounds per square yard calcium chloride.
- All dense graded aggregate shoulders are to slope away from the new edge of pavement at the rate of ¾" per foot.

**IX. CURBING**

**A. Bituminous Curbs**

- Bituminous concrete curbs shall be given a paint coat of asphalt emulsion.
- The surface under the bituminous concrete curb shall be tacked with asphalt emulsion.
- All bituminous concrete curbs shall be constructed of a Class I bituminous concrete mixture as specified by official Department of Highways specifications.
- All bituminous curbs shall be of the rolled curb type with a minimum base width of 8" and a minimum height of \_\_\_\_\_ inches. The top of the curb shall be constructed in such a manner as to guarantee a uniform rolled effect throughout the entire run.

**B. Concrete Curbs**

- All curbs or curb and gutter are to be constructed of Class A concrete (3,500 p.s.i. test) and are to be uniform in height, width, and alignment, true to grade and satisfactory in finish and appearance as determined by the Department. All materials and methods of construction, including curing, is to be in accordance with Department of Highways Standard Specifications for Road and Bridge Construction, latest edition.
- All concrete curbs are to be 6" in width, extend \_\_\_\_\_ " above finished grade and 12" below finished grade, with all visible edge rounded to 1/2" radii.
- All concrete curbs shall have expansion joints constructed at intervals of not more than 30 feet and 1/2" premolded expansion joint material (cut to conform to the curb or to the curb and gutter section) shall be used in each expansion joint.
- The last \_\_\_\_\_ feet of all concrete curbs are to be tapered down to finish grade.

**X. RIGHT-OF-WAY FENCE REPLACEMENT**

- The replacement fence shall be a height of at least 48" and shall be of sufficient density to contain all animals. (If applicable)
- The replacement fence shall be a minimum of one foot (1') and a maximum of two feet (2') outside the right-of-way line.
- The fence materials and design shall meet accepted industry standards and be treated as paintable.
- The permittee shall be required to maintain the fence in a high state of repair.
- The existing fence shall be removed by permittee and stored at Department's maintenance storage yard for future reuse by the Department.
- The control of access shall not be diminished as a result of replacement of the fence.
- Miscellaneous:

---

---

---

---

**NOTICE TO PERMITTEE**

THE PERMITTEE AGREES THAT ALL WORK WITHIN THE EXISTING RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE PLANS AS APPROVED AND PERMITTED BY AN ENCROACHMENT PERMIT, ANY CHANGES OR VARIANCES MADE AT THE TIME OF CONSTRUCTION WITHOUT WRITTEN APPROVAL FROM THE DEPARTMENT OF HIGHWAYS SHALL BE REMOVED BY THE PERMITTEE AT NO EXPENSE TO THE DEPARTMENT OF HIGHWAYS AND SHALL BE REDONE TO CONFORM WITH THE APPROVED PLANS.

Permittee agrees to the following terms and conditions:

TC 99-1  
Rev. 7/95

1. The permittee shall comply with and is bound by the requirements of the Department's Permits Manual as revised to and in effect on the date of the issuance of this permit which is made a part hereof by reference.
2. Permittee agrees that if the Department determines that vehicular capacity deficiencies or over capacity conditions develop as a result of the installation and use of this facility, the permittee shall adjust, relocate, or reconstruct the facilities and/or provide and bear the expenses for signs, storage lanes, or other corrective measures reasonably deemed necessary by the Department and as set forth in the Department's Permit Manual within a reasonable length of time after receipt of written notice regarding such adjustments, relocations, modifications, and/or corrective measures, such time to be specified in the notice. In cases where traffic signals are permitted or required, as determined by the Department, the costs for signal equipment and installation(s) shall be borne by the permittee and/or the Department in accordance with Department policy then in force as set forth in the Traffic Manual. Any modifications to the permittee's entrance necessary to accommodate signalization (including necessary easement(s) on private property) shall be the responsibility of the permittee, at no expense to the Department. (This applies only to Entrance Permits.)
3. The said encroachment will not infringe on the frontage rights of an abutting owner without written consent of the said owner as hereto: "I (we) consent to the granting of attached permit."  
Date \_\_\_\_\_ (This does not apply to utilities which serve the general public.)
4. Any permit granted hereunder shall be with the full understanding that it shall not interfere with any similar rights or permits heretofore granted to any other party except as otherwise provided by law.
5. A plan prepared by HMB, INC. and dated May, 1999 is attached hereto and made a part hereof, which describes the facilities to be constructed by the permittee for which facilities this permit is granted. The permittee agrees as a condition to the issuance of the permit to construct and maintain such facilities in accordance with said plan, and the permittee shall not use the facilities authorized herein in any manner contrary to that prescribed by this permit and plan. Normal usage and routine maintenance only are authorized under this permit.
6. Permittee shall comply with the Manual on Uniform Traffic Control Devices as revised to and in effect on the date of the issuance of this permit which is made a part hereof by reference.
7. Permittee shall at all times from date when work is first commenced and until such time as all facilities are removed from the right-of-way premise, defend, protect, and save harmless the Department from all liability, claims, and demands arising out of work undertaken by the permittee pursuant to this permit, due to any negligent act or omission by the permittee, its servants, agents, employees, or contractors. This provision shall not inure to the benefit of any third party or operate to enlarge any liability of the Department beyond that existing at common law if this right to indemnity did not exist.
8. Upon a violation of any of the provisions of this permit, the Department may revoke the permit by giving notice to the permittee in writing to remove from the right-of-way any facilities placed thereon within a reasonable time as set forth in the notice, and in the event said facilities are not so removed, and the right-of-way restored, the Department may cause same to be removed, and the costs thereof shall be charged to the permittee.
9. The permittee, his successors and assigns shall use the encroachment premises in compliance with all Federal requirements imposed pursuant to the provisions of the Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000-1) and regulations of the U.S. Department of Transportation as set forth in Title 49 C.F.R., Part 21, and as said regulations may be amended.
10. Permittee agrees that in the event it should become necessary, as may be reasonably determined by the Department, for the facilities covered by this permit to be removed or relocated in connection with the reconstruction, relocation, or improvement of the abutting highway, the Department may revoke this permit and require removal or relocation by the permittee at his own expense according and pursuant to the procedures provided in Paragraph 8 above except in those cases where the Department is required by law to pay any or all the same.
11. The permittee understands and agrees that this permit is personal to the permittee and shall not inure to his successors and assigns without the written approval of the Department (that he is bound by the provisions of this permit as long as the encroachment exists unless a written release has been obtained from the Department. (Does not apply to utilities serving the general public.)
12. If the work authorized by this permit is on a project in the construction phase, it shall be the responsibility of the permittee to make personal contact with Resident Engineer on the project to coordinate the permitted work with the State's prime contractor on the project.
13. This permit does not alleviate any requirements of any other government agency.
14. Permittee agrees to keep the priority route in which this permit was issued clear of dirt, mud, and debris during construction and for the life of this permit.

THE UNDERSIGNED APPLICANT (being duly authorized representative/owner) DOES AGREE TO ALL TERMS AND CONDITIONS SET FORTH HEREIN.

January 1st  July 1st  2001

Completion Date

May 28, 1999

Date

Signature

RECOMMENDED FOR APPROVAL

Permits Engr

Title

John A. Walker

Signature

Thomas D. Smith

Chief District Engineer

6/18, 1999

Date

PRIVATE ENTRANCE: TO BE COMPLETED BY PERSONNEL INSTALLING FACILITY.

Installed By:

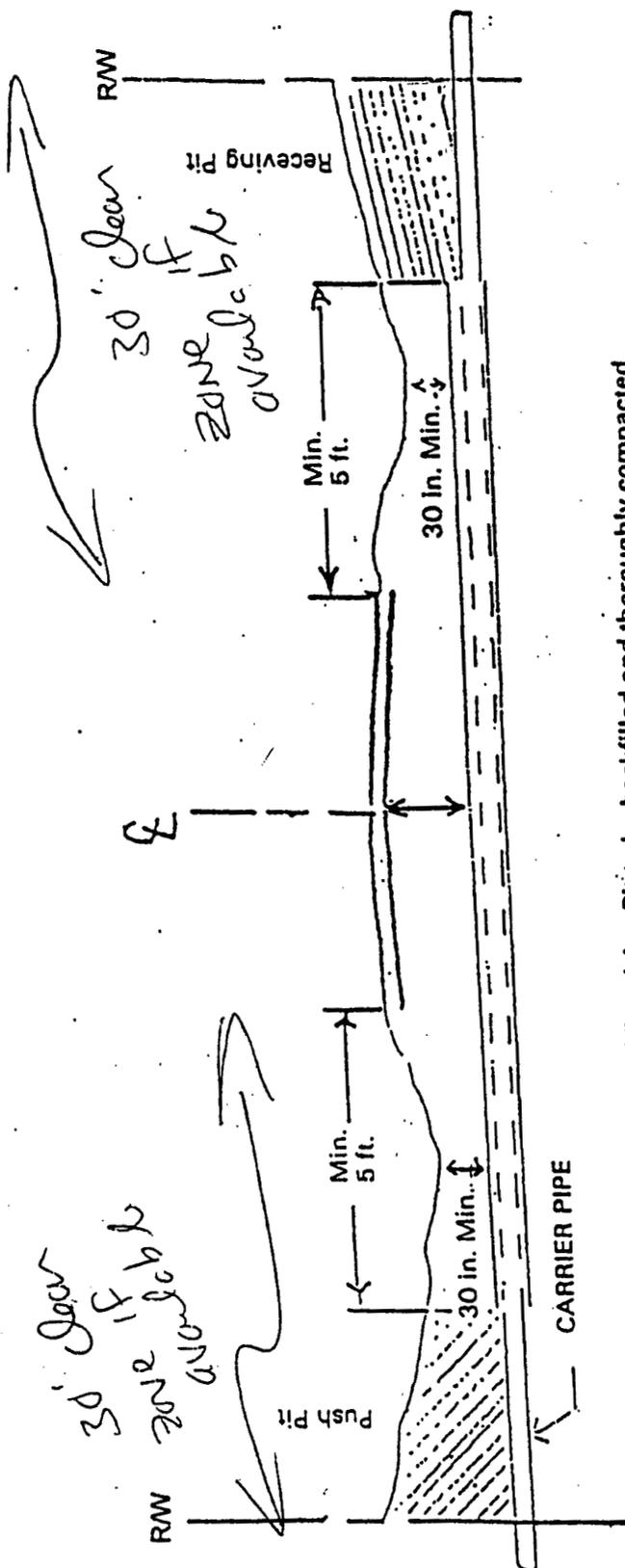
Title

Signature

Date

**Typical Highway Boring Crossing Detail**

Permit No. \_\_\_\_\_  
 Route No. 25P MPs 17.7 and 18.7  
 Pavement Width \_\_\_\_\_



1. Push Pit and Receiving Pit to be backfilled and thoroughly compacted.
2. All Ditch Lines to be left open.
3. Seed and straw all areas disturbed by this work.

Services over 2" to be encased or exempt under Chapter 2 of the Permits Guidance Manual

SECTION 1  
GENERAL SCOPE AND SPECIAL PROVISIONS

1. Scope

The instructions and information set out in the paragraphs of the Detailed Specifications shall supersede the instructions and information set out in the Information for Bidders, General Conditions, and Supplemental General Conditions if and when differences occur.

2. Shop Drawings, Product Data, and Samples

Shop drawings, product data, and samples as discussed in Paragraph 5 of the General Conditions shall be furnished by the Contractor to the ENGINEER. Unless otherwise set out, all shop drawings shall be furnished in five copies. It shall be clearly understood by the Contractor that the ENGINEER will examine the shop drawings for general design only, and that his approval stamped on such drawings shall be approval only for general design, and the Contractor shall in all cases be held responsible for detailed dimensions. In case of discrepancy between the shop drawings and the requirements of the plans, specifications, and contract documents, the provisions of the plans, specifications, and contract documents shall prevail even though the shop drawings have been approved by the ENGINEER, unless the conflict therein has been specifically waived in writing by a Change Order.

3. Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the work in accordance with the contract documents and fails within ten days after receipt of written notice from the OWNER to commence and continue correction of such default or neglect with diligence and promptness the OWNER may, (without prejudice to any other remedy he may have) make good such deficiencies. In such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the OWNER.

4. Execution and Coordination of the Work

It is intended that the work covered by this contract be done so as to cause the minimum amount of interference with traffic and/or existing utilities. The Contractor will be required to organize and schedule his work so as to keep the existing facilities in full operation during the construction period insofar as is consistent with the nature of the construction work to be performed. The manner in which shutdowns will be made and the work schedule of the

Contractor during shutdowns will be subject to the approval of the OWNER. The Contractor shall schedule a proposed shutdown with the OWNER at least three days prior to the outage. All shutdowns shall be made by employees of the OWNER. Although every effort will be made to cause the minimum amount of interference with the Contractor's work, the interest of the OWNER in regard to the existing facilities must always take precedence over the construction work. Therefore, the right is reserved by the OWNER to put any lines or other facilities (that may be shut down for the construction work) back into service when an emergency arises.

The work on the project shall be scheduled so as to expedite service to new customers. The Contractor shall install meters and perform testing as each section of new water main is constructed. Water lines or sections of lines thus completed shall be placed in service while work proceeds on other lines or sections.

Following installation of the pipeline, "rough cleanup" work shall be performed. This shall consist of grading the trench to create a neat, low mound of backfill material and disposing of any excavated material, rubbish, etc. (See Sections 1.15 and 3.21) Crushed stone shall be added to driveways where necessary and fences repaired to the satisfaction of the property owners. After trenches have had adequate time to settle, final grade work and seeding shall be performed as described in Section 3.22.

5. Progress Schedule, Construction Records, and Reports

The Contractor shall furnish the OWNER with proof that all payrolls for services rendered and invoices for materials supplied have been duly paid as herein required, and such other data as the OWNER may require.

The Contractor shall furnish (and keep current) a suitable progress chart or schedule showing the estimated (and actual) progress on the work. The progress chart or schedule shall be subject to the approval of the ENGINEER.

The Contractor shall furnish all the necessary information for and prepare the partial payment estimates on forms approved by the ENGINEER.

The OWNER, or his authorized representatives and agents, shall be permitted to inspect all payrolls, records of personnel, invoices of materials, and other relevant data and records.

6. Lines and Grades

The Contractor shall be held totally responsible for construction of the work according to the lines and grades shown on the plans. The Contractor shall also insure that the work is constructed in proper relation to proposed highway construction where applicable.

The Contractor shall furnish all labor, equipment, stakes, and grade boards. The contractor also shall be required to furnish equipment and aides when required by the ENGINEER in checking lines and grades. The labor and equipment shall be available to the ENGINEER on call, and the labor shall be fully capable of performing the duties of rodman and/or chainman.

7. Access to and Inspection of the Work

Representatives of the OWNER shall at all time have full access for inspection of the work and the Contractor shall provide proper facilities for such access and inspection.

8. Work on Private Property

In connection with work performed on private property, the Contractor shall take every precaution to avoid damage to the property owners' buildings, grounds, and facilities. Fences, hedges, shrubs, etc., within the construction limits shall be removed carefully, preserved, and replaced when the Construction is completed in accordance with the requirements set out hereinafter in these specifications. When construction is completed, the private property owner's facilities and grounds shall be restored to as good (or better) condition than found as quickly as possible at the Contractor's expense. The OWNER reserves the right to require the Contractor to obtain a signed Release from each property owner affected by the work. Said Release shall indicate that the property owner is satisfied with the restoration of his land. However, the execution of such a release shall not relieve the Contractor from any of his contractual obligations or other claims that may arise at a later date. The widths of construction easements obtained by the OWNER from property owners is normally 15 feet each side of the pipeline and the Contractor shall confine his activities to the area within the limits of the easements unless specific permission is obtained by the Contractor from property owners.

Large trees, or other facilities within the actual construction limits that cannot be preserved and replaced shall be removed by the Contractor but the OWNER will assume the responsibility for settling with the property owner for the loss of said trees or facilities. However, trees and facilities for which the OWNER has made such settlement will be designated on the drawings and the Contractor shall be solely and entirely responsible for any damage to trees and facilities not so designated.

All trees and brush cleared along the route of the pipeline shall be disposed of by the Contractor in a manner suitable to the ENGINEER and property owner. If such trees and brush are left on the property the Contractor shall obtain a release for same from the property owner.

9. Shoring, sheeting, and Bracing of Excavations

Where unstable material is encountered or where the depth of excavation warrants it, the sides of the trench or excavation shall be supported by substantial sheeting, bracing, and shoring, or the sides sloped to the angle of repose. The design and installation of all sheeting, sheet piling, bracing, and shoring shall be based on computations of pressure exerted by the materials to be retained under existing conditions. Adequate and proper shoring of all excavations and safety of workmen shall be the entire responsibility of the Contractor; however, the OWNER may require the submission of shoring plans (accompanied by supporting computations) for approval prior to the Contractor undertaking any portion of the work.

Foundations, adjacent to where the excavation is to be made below the depth of the foundation, shall be supported by shoring, bracing, or underpinning as long as the excavation shall remain open and the Contractor shall be held strictly responsible for any damage to said foundations.

Care shall be taken to avoid excessive backfill loads on the completed pipe lines and the requirements regarding the width of the ditch as specified herein be strictly observed.

Trench sheeting shall not be removed until sufficient backfill has been placed to protect the pipe.

All sheeting, planking, timbering, bracing, and bridging, shall be placed, renewed, and maintained, as long as is necessary. Sheeting is not a pay item unless the Contractor is required and/or instructed by the OWNER to leave same in place.

10. Existing Utilities

Special precautions shall be taken by the Contractor to avoid damage to existing overhead and underground utilities owned and operated by the OWNER, or by other public or private utility companies.

With particular respect to existing underground utilities, all available information concerning their location has been shown on the drawings. While it is believed that the locations shown are reasonably correct, the OWNER cannot guarantee the accuracy or adequacy of this information.

The location of buried telephone cable often differs from the preliminary information given the OWNER by phone companies and shown on the plans. Therefore, in order to construct a pipeline that is parallel to the highway right-of-way as specified, the Contractor may be required to cross buried telephone cable at various locations not indicated on the plans. The Contractor shall consider these crossings as incidental to the pipeline construction.

Before proceeding with the work, the Contractor shall confer with all public or private companies, agencies, or departments that own and operate utilities in the vicinity of the construction work. The purpose of the conference (or conferences) shall be to notify said companies, agencies or departments of the proposed construction schedule, verify the location of, and possible interference with, the existing utilities that are shown on the plans, arrange for necessary suspension of service, and make arrangements to locate and avoid interference with all utilities (including house connections). The OWNER has no objection to the Contractor arranging for the said utilities companies, agencies, or departments to locate and uncover their own utilities; however, the Contractor shall bear the entire responsibility for locating and avoiding, or repairing damage to said existing utilities.

Where existing utilities or other underground structures are encountered, they shall not be displaced or molested unless necessary and then only with the approval of the respective owner. In such cases they shall be replaced in as good (or better) condition than found as quickly as possible. All such utilities that are so displaced or molested shall be replaced at the Contractor's expense.

Should it become necessary to provide additional guying or support of power, lighting, or telephone facilities, the Contractor shall consult with the authorities of these utilities so that suitable arrangement can be made for the protection of same.

All costs for temporary or permanent work necessary for the protection of utilities, private or public, shall be included in the contract amount to which the items of work pertain, or may be considered to be incidental thereto. In addition, the Contractor shall be responsible for any damage to the existing utilities resulting from the construction operations and shall bear the cost of all repair or replacement necessary for correction.

It is expected that the Contractor will be diligent in his efforts and use every possible means to locate existing utilities. Any claims for unavoidable damage, based on improper or unknown locations, will be examined thoroughly in the light of the Contractor's efforts to locate the said utilities or obstructions prior to beginning construction.

11. Utilities Required by Contractor

All electrical current and/or any utility service required by the Contractor shall be furnished at his own expense except as noted hereinafter.

12. Supervision of Installation

All special equipment or materials shall be installed under the supervision of a qualified installation ENGINEER and/or representative furnished by the manufacturer of such equipment or materials.

13. Execution of the Contract

The construction contract and the performance bonds shall be executed within the time specified in the Information for Bidders and in at least five (5) copies.

14. Permits, Codes, Etc.

Unless otherwise set out in the specifications or required by the agencies involved, the Contractor shall make application for, obtain, and pay for all licenses and permits, and shall pay all fees and charges in connection therewith. The Contractor shall be required to comply with all state or municipal ordinances, laws, and/or codes insofar as the same is binding upon the OWNER.

15. Cleaning up and Removal of Rubbish

The Contractor shall at all times keep the premises free from accumulations of waste materials or rubbish caused by his employees or work and shall keep the work site in a clean and useable condition satisfactory to the ENGINEER. The contractor shall direct his forces to promptly clean up streets, sidewalks, drainage channels, or private property, affected by his construction operations, when in the opinion of the ENGINEER such clean up is needed. At the completion of the work the Contractor shall remove all his rubbish from and about the site of the work and all of his tools, equipment, and surplus materials.

The contract shall not be considered complete until all construction structures, equipment and rubbish from construction are cleaned from the site of the work. All damage to existing paving, grounds, and structures caused by the Contractor's operations must be repaired or the owners compensated for such damage before the contract will be considered complete. This includes the removal of rock from blasting (1 1/2" or over in size), and the broom sweeping, or water removal, of dirt from pavement.

16. Items Deleted, Reduced and/or Increased

The OWNER reserves the right to delete any bid item or in the case of unit price items, delete, reduce or increase the quantities involved. Bidders shall be aware of this possibility and shall base their bids accordingly.

SECTION 2  
QUALITY ASSURANCE

1. Approval of Testing Agencies and Reports

When in these Contract Documents inspection and testing services are required, bureaus, laboratories, and/or agencies selected for such inspection and testing shall be approved by the ENGINEER. If inspection and testing services are provided by the OWNER or are performed in accordance with Section 9.8 of the General Conditions, the OWNER shall select the laboratories and/or agencies for such inspection and testing.

2. Suitability of Materials and Test Reports

Where prior inspection and testing of materials is required, documentary evidence in the form of test reports, in the form and number required by the ENGINEER, shall be furnished prior to the time the material is incorporated into the work. All rejected material shall be removed promptly from the premises.

3. Governing Specifications

It is the intention of the ENGINEER in the preparation of these specifications to define properly the kind and quality of materials to be furnished. The standards of the American society of Testing Materials (ASTM); standards of the American Water Works Association (AWWA); or other such agencies may be referred to in the specifications. Where such standards are referred to, said references shall be construed to mean the latest amended and/or revised versions of the said standard specifications. In the selection of samples and the routine testing of materials, the testing laboratory shall follow the standard procedure as outlined by the ASTM, unless otherwise set out.

4. Extent of Inspection and Testing Service

It is intended that materials of construction, particularly those upon which the strength and durability of the work may depend, shall be inspected and tested to establish conformance with specifications and suitability for uses intended. The following is a schedule showing the extent of testing, and requirements and methods of reporting. If it is found that this list does not cover all items that will require testing, then such materials shall be tested as directed by the ENGINEER.

5. Requirements and Methods of Reporting

In general, four copies of all test reports will be required with two copies to the Contractor, one to the ENGINEER, and one to the OWNER. All copies shall be forwarded to the ENGINEER.

6. Coarse Aggregate (Backfill and Surfacing)

Regarding coarse aggregates for use in backfill and surfacing, certifications, which state that the aggregates comply with the specifications and give the gradation for each size used, will be required from the material supplier.

7. Concrete (Kickers, Anchors, Encasement and Pavement)

The mix design and a certification that the concrete supplied for this project is designed for a 28 day compressive strength of 2,500 psi shall be submitted by the supplier.

8. Fine Aggregate (For Use In Cement Concrete)

Standard tests shall be made in advance of concreting by an approved independent laboratory per ASTM C33, Paragraphs 2, 3, 4, and 5, and ASTM C40 on each fine aggregate proposed to be used. Other tests being satisfactory, the aggregate may be used pending results of 28-day concrete strength tests.

9. Coarse Aggregate (For Use In Cement Concrete)

Standard tests shall be made in advance of concreting by an approved laboratory on each grading of each coarse aggregate proposed to be used per ASTM C33, Paragraphs 6, 7, 8, 9, 10, and 11.

10. Concrete Tests (For Concrete Used In Structures)

A. Standard Slump Tests

Slump tests shall be made per ASTM C143. Not less than one such test shall be made for each 50 cubic yards of concrete placed at one operation.

B. Concrete Control Tests

During the progress of the work and for each different mix of concrete, standard 6-inch concrete cylinders shall be made and tested. The testing shall be done per ASTM C39, and ASTM C31 (paragraphs 7a and 7c). When field curing will be used

in lieu of, or supplementing laboratory curing, care shall be exercised to avoid mistreatment of the cylinders in the field and testing shall be the same as specified for laboratory cured samples.

Test cylinders shall be made from each day's pour at the frequency specified by ACI 318 with a maximum of two from each batch or ready-mix truck load. The maximum requirement will be imposed only when the ENGINEER deems necessary due to wide fluctuations in the concrete quality. A minimum of three cylinders will be required for each day's pour if the concrete is used in structures or otherwise in a load-carrying capacity.

Each cylinder shall be numbered and logged, so as to adequately identify the representative concrete in the structure.

Where three cylinders are made from each day's pour, one cylinder shall be tested at 7 days and two at 28 days. Where more than three cylinders per day are required, the "break" schedule shall be as requested by ENGINEER.

11. Reinforcing Steel

Reinforcing steel shall undergo a field inspection for section, rust, shape, and dimensions, plus certified test report for heat number(s).

12. Ductile Iron Pipe

Each piece of pipe shall bear the manufacturer's name or trademark and the date manufactured. Each piece of pipe shall also be certified by the manufacturer to have met the requirements of the governing standard specifications. Manufacturer Certifications and test reports shall be forwarded to the ENGINEER. Also, each piece shall be visually inspected in the field for any defects and specification conformance.

13. PVC and PVC(MO) Pipe for Water Lines

PVC or PVC(MO) pipe shall be marked in accordance with ASTM D-2241. The manufacturer shall supply certifications indicating that all pipe to be supplied for the project meets the applicable specifications. This information shall be furnished to the ENGINEER with shop drawings.

The services of an independent testing laboratory are required to perform certain functions described below. The cost of the services provided by the independent laboratory shall not be the responsibility of the OWNER.

The name and address of the independent laboratory and a certified copy of the resume for the person who will perform the work shall be submitted for approval with the shop drawings. The employee of the independent laboratory that performs the subject work shall be experienced in pipe manufacturing and/or plastics testing and shall be an ASQC certified quality auditor or equal, as approved by the ENGINEER. All services described herein for the independent laboratory shall be performed only by the employee whose resume is approved by the ENGINEER.

It shall be the responsibility of the independent testing laboratory to audit the total quality system of the pipe manufacturer to determine if it meets the requirements set forth in Iso/IEC Guide 25:1990 (E), Sections 4 through 16, and to determine if the manufacturer is capable of maintaining the specified requirements of the pipe and material. The independent laboratory shall submit to the ENGINEER a report detailing the quality system audit and shall state whether the manufacturer is in compliance or non-compliance with the above criteria. Manufacturer compliance shall be required prior to approval of any shop drawings for PVC or PVC(MO) pipe.

The independent testing laboratory shall perform and/or witness the following tests to determine if the PVC or PVC(MO) pipe to be shipped to the project conforms to the project specifications. The following tests and any other appropriate examinations shall be performed on each "lot" of pipe (a "lot" shall be defined as a run of a certain class and size of pipe amounting to not more than 5,000 LF of pipe) to determine compliance with ASTM D2241 and other applicable specifications:

- |              |   |
|--------------|---|
| ASTM D2122 - | Dimensional analysis in regard to outside diameter, wall thickness, thickness range, out-of-roundness, joint dimensions and tolerances per ASTM D 3139  |
| ASTM D1599 - | Short term rupture  |
| ASTM D2152 - | Acetone immersion   |
| ASTM D2241 - | Flattening resistance   |
| ASTM D2444 - | Impact resistance   |
| ASTM F477 -  | Gasket Hardness and Dimensions  |
| ASTM D1784 - | The pipe manufacturer shall provide results on file of tests performed to determine the cell classification for each batch of PVC resin or rework material used in the manufacture of pipe for this project. The manufacturer shall certify to the OWNER that such results are the tests for the resin used to produce the pipe supplied on this project. |
| ASTM D3139 - | Internal pressure test (Three joint tests are required. The ENGINEER will instruct the independent lab as to which three joint specimens to select for this test.)  |

ASTM D1599 requires testing of five specimens for each short term rupture test. On this project the total number of specimens tested shall be the greater of one per lot or a total of five for each size/class category of pipe per contract. The total number of specimens shall be divided as evenly as practicable between the different lots.

The PVC pipe testing described in this subsection is not required on any certain size and class of pipe, if the amount of such pipe on the particular contract is equal to or less than 500 LF.

It shall be the responsibility of the independent testing laboratory to reject any "lot" of pipe on which conformity to all of the applicable specifications is not established. The independent laboratory shall submit to the ENGINEER a written report outlining its actions in this regard, the tests performed and the results by pipe code number and "lot", and provide its certification that all pipe manufactured for the project does conform to the applicable specifications. This report shall be received by the ENGINEER prior to the manufacturer delivering any pipe to the job site.

To further indicate to the ENGINEER that the pipe received at the job site is the pipe the independent lab has tested and certified, each bundle of certified pipe shall be marked by the independent lab. This marking shall be easily identifiable, but not easily copied, waterproof and not transferable to a different bundle after it is initially applied. The ENGINEER will not allow any pipe without the designated marking to be unloaded on the job. The independent lab shall inform the ENGINEER of the marking to be used several days prior to shipment of the pipe.

Each truckload of pipe delivered to the project shall be subject to whatever field measurements and tests deemed necessary by the OWNER. These tests may be conducted by the OWNER or its representative. The cost of field testing shall be the responsibility of the OWNER, but the cost of any pipe destroyed during such testing shall be the responsibility of the Contractor.

14. Testing Water Lines

Water lines shall be tested at a pressure equal to the rated working pressure of the pipe for a period of four hours., Line segments between gate valves shall be tested separately. During the duration of the test, the line segment shall display leakage not exceeding ten gallons per day per inch of pipe diameter per mile of pipeline. This rate of leakage is given below for 1,000 feet of pipeline and various diameters of pipe:

<u>Pipe Diameter</u>	<u>Max. Leakage in 4 hrs. For 1,000 feet of pipe</u>
3"	0.95 gallons

4"	1.26 gallons
6"	1.89 gallons
8"	2.53 gallons
10"	3.16 gallons
12"	3.79 gallons

Lines which fail to meet this criteria shall be repaired and retested as necessary until requirements are met. If the initial pressure test indicates that repairs must be made to a particular line segment, the ENGINEER may require a 24-hour pressure test to verify soundness of the construction work and this test shall be performed at no additional expense to the OWNER. Pressure tests shall be performed only after service line taps are completed.

The pressure gauge and/or recorder used for testing pipelines will be supplied by the OWNER. The Contractor shall supply the necessary pump, taps, connections, water meter, and all piping and fittings required for testing. All methods and equipment for pressure testing shall be as approved by the ENGINEER.

The Contractor shall schedule his work so that each section of water line between gate valves shown on the plans shall be pressure tested in sequence as the pipeline work progresses. The Contractor's schedule in this regard shall be as approved by the ENGINEER.

15. Testing Tapping Sleeves

All tapping sleeves and valves shall be subjected to a pressure test while in place on the existing water line, prior to the existing line being tapped. The tapping sleeve and valve shall be tested at the rated working pressure of the sleeve over a period of 15 minutes. The connection being tested shall maintain 100 percent of the test pressure throughout the test period. The Contractor shall supply all necessary equipment for testing sleeves. Other details of the test shall be as directed by the ENGINEER.

SECTION 3  
WATER LINES AND WATER SERVICES

1. Scope of the Work

The work to be accomplished under this section of the specifications consists of the furnishing of all materials and labor necessary for the construction of water lines, including all services, meters, fittings, blow-offs, valves, accessories, and appurtenances in strict accordance with the specifications and the applicable plans.

2. Location of Water Lines

The approximate location of water lines in relation to the limits of rights-of-way, pavement, etc. is shown on the plans but is not guaranteed. The location shown was chosen to minimize the overall project cost with respect to rock excavation, pavement replacement, crushed stone for traffic bound roadway, customer water services, etc. Water lines shall generally be constructed in easements on private property parallel to and within 10 feet of highway rights-of-way.

The final location (as constructed) may be varied upon approval by the ENGINEER, provided: (1) the proposed location is approved by the Kentucky Department of Transportation (Bureau of Highways), the County Highway Department, or other agency, legal entity or property owner having jurisdiction, and (2) the effect reduces the project cost. The final location may be varied by necessity due to construction conditions at the direction of the ENGINEER, or due to the requirements of the Kentucky Department of Transportation (Bureau of Highways), the County Highway Department, or other agency, legal entity or property owner having jurisdiction. The construction of pipelines in the highway, road, or street right of way will not be allowed except where shown on the plans.

3. Traffic Control and Work in Highway Rights of Way

The Contractor shall (before beginning work on any public highway right-of-way) make arrangements for maintaining the traffic on said highways and/or roadways, or re-routing traffic as may be required. The applicable regulations of the Kentucky Department of Transportation must be followed in this regard.

The Contractor shall furnish proper equipment which shall be available at all times for maintaining streets, driveways and roads upon which work is being performed. All such streets, driveways and roads shall be maintained suitable for traffic until complete and final acceptance of the work.

When the Contractor is cutting across a street or highway, he is to cut half of the street at one time, lay the pipe, and complete the backfilling operation so that traffic may pass over this trench before the opening of the trench for the other half of the street or highway. In lieu of the above, bridging of the trench may be required. The time and method of making these crossings shall be approved by the ENGINEER, and the agency or legal entity having responsibility for the maintenance of the street.

The Contractor shall be responsible for erecting signs, providing flagmen, providing any other such items, and performing all work as required by Kentucky D.O.T. regulations, the Kentucky D.O.T. permit granted to the OWNER for construction of this specific project, and/or regulations of other agencies having jurisdiction over the right of way.

4. Excavation of Pipeline Trenches

Unless otherwise directed by the ENGINEER or as shown on the plans, trenches in which pipes are to be laid shall be excavated in open cut to a depth which will allow a minimum of 2 feet 6 inches of cover above the top of the pipe. The diameter of the pipe, proper bedding and construction of bell holes must be considered in determining the depth of excavation. Extra depth excavation may be required by the Kentucky Department of Transportation (Bureau of Highways) or as shown on the plans.

Trenches shall be of sufficient width to provide free working space on each side of the pipe and to permit proper backfilling around the pipe, but unless specifically authorized by the ENGINEER, trenches shall in no case be excavated or permitted to become wider (as measured at the top of the pipe) than two feet plus the nominal diameter of the pipe. The desired width shall be the nominal diameter of the pipe plus 16 inches. The minimum allowable trench width in rock excavation shall be the nominal diameter of the pipe plus 12 inches. The minimum allowable trench width in earth excavation shall be the nominal diameter of the pipe plus 6 inches. Trenching equipment that cannot maintain these minimum widths will not be allowed for use on the project.

Trench excavation shall proceed far enough ahead of pipe laying to reveal any obstructions that might necessitate changing the line or grade of the pipeline. The trench shall be reasonably straight and uniform in grade. Trenches shall be kept free of water during the construction of the pipeline and removal of water shall be at the contractor's expense. Trench excavation shall proceed in a continuous manner from the beginning of the pipeline to the end.

Unless specifically authorized by the ENGINEER, no skipping by obstacles such as rock, road crossings, existing utilities, etc. shall be permitted. If skips are authorized by the ENGINEER and the contractor does not close the resulting gaps in the pipeline in a timely manner, the ENGINEER may require the contractor to discontinue all other operations until the gaps are closed.

Unless specifically directed otherwise by the ENGINEER, not more than five hundred feet of trench shall be opened ahead of the pipe laying, and not more than five hundred feet of open ditch shall be left behind the pipe laying. All barricades, lanterns, watchmen, and other such signs and signals as may be necessary to warn the public of the dangers in connection with open trenches, excavations, and other obstructions, shall be provided by and at the expense of the Contractor.

At the close of each working day all trenches that have been excavated shall be refilled unless exceptions are granted by the ENGINEER. All public or private drives shall be promptly backfilled or bridged at the direction of the ENGINEER.

All excavation shall be "unclassified" and therefore there will be no separate payment for rock excavation. The cost of all excavation should be merged into the cost of constructing the water line.

5. Blasting

All blasting operations shall be conducted in accordance with the applicable county and/or municipal ordinances and state and/or federal laws, and all explosives shall be transported and stored in conformity with said ordinances and laws. No blasting shall be done within five feet of any water mains, or other existing utilities except with light charges of explosives. Utility companies with facilities in the vicinity of the proposed work may also have special requirements regarding blasting operations. Contractors shall familiarize themselves with any such requirements and shall base their bids accordingly.

Pre-blast surveys shall be performed by a qualified firm acceptable to the ENGINEER on all structures within 100 feet of any blasting operation. These surveys shall be done at the expense of the Contractor and one copy of each report shall be forwarded to the ENGINEER prior to blasting. All shots shall be covered with heavy timber or steel blasting mats to prevent flying material. Any damage done by blasting is the responsibility of the Contractor, and shall be promptly and satisfactorily repaired at his expense.

There may be circumstances where rock excavation must be performed without blasting. The contractor shall be solely responsible for excavation work on his contract by whatever means practicable.

6. Pipe Bedding

Where rock excavation is encountered or in rocky soil as directed by the ENGINEER, the pipe shall be bedded with six (6) inches of crushed stone. Crushed stone shall be No. 9-M as described in the Standard Specifications for Road and Bridge Construction as published by the Kentucky Department of Transportation, Bureau of Highways. In certain cases the Contractor may be required to move earth of good quality from previous trench excavation for use as bedding material.

7. Pipe Laying

A. General

The Contractor shall notify the ENGINEER as to the date and time of all pipe deliveries and shall not unload any pipe except in the presence of the Inspector. Pipe shall be transported and handled in strict conformance with the manufacturer's recommendations.

The Contractor will be required to stockpile all pipe in central locations. Pipe strung along the route of the pipeline, shall be limited to the current day's expected production.

Pipe laying shall be in strict accordance with the manufacturer's recommended practice. Special tools lubricant and equipment for proper laying shall be provided by the manufacturer. If the Contractor proposes a method of installation not covered by the manufacturer's recommended procedures, the Contractor shall obtain written certification from the manufacturer that installation by this proposed method will in no way affect the manufacturer's warranty of the pipe.

Pipe shall not be rolled, or dropped, into the trench.

All angles or bends in the pipe lines, either vertical or horizontal shall be satisfactorily braced or anchored against the tendency of movement with concrete anchors to the satisfaction of the ENGINEER.

Open ends of unfinished pipelines shall be securely plugged or closed at the end of each day's work, or when the line is left temporarily at any other time.

B. Ductile Iron Pipe

The trench shall be excavated to the required depth and width, bell holes and/or joint holes shall be dug in advance of the pipe laying.

The beds of each piece of pipe shall be prepared carefully so that each individual piece of pipe shall have a uniform bearing. Pipe shall be laid in a straight line and grade without kinks or sags, and shall be laid in a workmanlike manner. Bell holes and/or jointing holes shall be large enough so that the bell or hub will clear the ground and leave ample room for making and inspection of joints.

Before each piece of pipe is lowered into the trench, it shall be swabbed out thoroughly to insure its being clean. Each piece of pipe shall be lowered into the trench separately.

Care shall be taken to prevent injury to the pipe coating both inside and outside. No piece of pipe or fitting which is known to be defective shall be laid or placed in the lines. If any defective pipe or fittings shall be discovered after the pipe line is laid, they shall be removed and replaced with a satisfactory pipe or fitting without additional charge. In case a length of pipe is cut to fit in a line, it shall be so cut as to leave a smooth end at right angles to the longitudinal axis of the pipe.

C. Plastic Pipe

Plastic pipe shall be installed in accordance with manufacturer's recommendations. A representative who is a direct employee of the pipe manufacturer shall conduct training sessions for Contractor's personnel regarding proper pipe installation. The manufacturer's representative shall certify to the ENGINEER the names of Contractor's personnel who have attended such training. Pipe laying and assembly work shall be performed only by personnel who appear on the manufacturer's certified list.

Backfilling shall be done in accordance with Paragraph 8, Backfilling Pipeline Trenches, where not in conflict with manufacturer's recommendations.

8. Backfilling Pipeline Trenches

Backfilling shall be conducted at all times in a manner to prevent damage to the pipe and the exterior protection on the pipe. Placing of backfill shall be done only in the presence of the ENGINEER after his final inspection and acceptance of the pipe in place. If material for backfilling is not available at the construction site, the contractor shall "import" earth of good quality from a site approved by the ENGINEER. This will not be a separate pay item.

In areas of earth excavation of the pipeline trench, earthen material reasonably free from rock and acceptable to the ENGINEER shall be used in the backfilling of the trench. Backfill material free of rock over one inch in diameter shall be placed around the pipe up to the point where the pipe is thoroughly covered with at least one foot of material. Working or working on the completed pipe (except as may be necessary in backfilling) shall not be permitted until

the trench has been backfilled to a height of at least one foot above the top of the pipe. The filling of the trench shall be carried on simultaneously on both sides of the pipe in such a manner that the completed pipeline will not be disturbed and injurious side pressures do not occur.

In areas of rock excavation of the pipeline trench, crushed stone as used for bedding shall be used as backfill material to a level six inches above the top of the pipe. Placement of this backfill material shall be performed as described above. In certain cases in lieu of or in addition to the crushed stone backfill the Contractor may be required to use earth of good quality as backfill material to a depth of twelve inches above the pipe as described above.

In filling the remainder of the trench above the initial backfill described above, whether in earth or rock excavation, earth backfill material reasonably free of rock may be shoved into the trench without compacting and heaped over, then compacted by rolling with the wheel of a grader or front-end loader. Earth backfill material containing rocks greater than 6-inches in diameter shall not be acceptable.

The final step in the backfill operation shall be to windrow good quality earthen material over the top of the ditch. The windrow shall be no higher than one foot and no wider than the width of the ditch plus four feet. All other excavated material except that required for the above described windrow shall be considered excess and shall be disposed of as described hereinafter.

Where street, driveway and highway crossings are made and where streets or highways are proposed, the Contractor will be required to tamp all backfill as described hereinafter and backfill the trench with No. 9-M crushed stone.

Where tamping is required, the backfilling shall all be done in layers not exceeding six inches and firmly tamped into place by tampers or rammers. The ENGINEER may permit puddling of ditches to compact the backfill in lieu of tamping with mechanical tampers except where street paving is to be replaced immediately after the backfilling is completed. The ENGINEER may also require puddling where (in his opinion) it is necessary for proper compaction.

9. Disposition of Excess Excavated Material

Excavated materials not used for backfill including "shot rock" and boulders shall be disposed of within one week of the adjacent trench being backfilled. Disposal of excavated material shall be performed so as to cause the least interference with the completed pipeline and operations of the OWNER, property owners, etc. and in a manner satisfactory to the ENGINEER.

10. Replacing Streets and Roadways

The Contractor shall replace all streets, alleys, driveways, and roadways which may be removed, disturbed, or damaged in connection with his operations under this contract. He shall reconstruct same to the satisfaction of the Kentucky Department of Transportation, the County Highway Department, or other legal entity or property owner having jurisdiction. The reuse of materials removed in making excavations will be permitted, provided said materials are in good condition and acceptable to the ENGINEER.

The Contractor will be paid for street replacement only where the line is constructed within the paved surfaces. Care shall be exercised to minimize damage to graveled shoulders and paved surfaces.

Gravel, crushed limestone, bituminous materials, or other materials used in the resurfacing of streets, shall meet the current requirements of the Kentucky Department of Transportation (Bureau of Highways) Specifications.

A. Traffic-Bound Base Course

On all trenches where replacing streets or drives is required, it shall be handled in the following manner:

After the backfill has been compacted (by mechanical tamping) and brought up to approximately finish grade, the Contractor then shall place crushed stone when and as directed by the ENGINEER as a traffic-bound base course, at the proper elevation to allow for settlement but not in such a way as to prevent traffic from using it. Crushed stone shall be Kentucky Department of Transportation, dense graded aggregate.

The Contractor may be required by the ENGINEER to maintain the traffic-bound base course (by adding crushed stone as specified hereinbefore) in a safe and passable condition for a period of 60 days (or until such time as sufficient settlement has taken place in the opinion of the ENGINEER) and the trenches are ready for final resurfacing. Crushed stone will be paid for at the unit bid price specified in the contract.

B. Subgrade for Final Resurfacing

The traffic-bound course hereinbefore described shall comprise the base course for all types of resurfacing.

When, in the opinion of the ENGINEER, the trench has reached a condition of settlement satisfactory for final resurfacing, the Contractor shall first strip the base

course or backfill with crushed stone (size as specified hereinbefore) to obtain the proper subgrade elevation. The subgrade then shall be rolled with an approved type roller or tamped until thoroughly compacted. Any depressions shall be filled with crushed stone (as specified hereinbefore) and the process of rolling or tamping continued until the subgrade has a smooth and uniform surface.

C. Portland Cement Concrete Pavement

Where Portland Cement Concrete Pavement is to be replaced, or is required under bituminous pavement replacement, it shall conform to the existing pavement and/or the ENGINEER'S instructions (not less than six inches thickness), and the type concrete required by the Kentucky Department of Transportation shall be used.

D. Asphaltic Concrete Pavement

Where asphaltic concrete pavement is to be replaced, the subgrade shall be prepared as hereinbefore specified, and this subgrade shall comprise the base course upon which the concrete subslab and/or the bituminous pavement shall be laid. Asphaltic concrete shall be as required by the Kentucky Department of Transportation.

Where no Portland cement concrete subslab is required, the subgrade or base shall be cleaned and broomed thoroughly and a prime coat of medium tar shall be applied uniformly at the rate of .20 to .25 gallons per square yard. Where Portland cement concrete subslab is required, the prime shall be applied at the rate of approximately .05 gallons per square yard. The prime shall be applied by a pressure distributor or other approved pressure spray method.

E. Bituminous Surfacing (Surface Treatment)

Where bituminous surfacing is to be replaced as shown on the plans, or as directed by the ENGINEER, the traffic-bound base shall comprise the subgrade upon which the bituminous surfacing shall be constructed. After the subgrade or base has been prepared, thoroughly cleaned and broomed, a prime coat of medium tar shall be applied at the rate of .30 to .35 gallons per square yard.

When the prime coat has become tacky but not hard, the bituminous material (asphalt of the grade directed by the ENGINEER) shall be applied in two applications at the rate of .35 to .45 gallons per square yard for each application. The contractor shall apply approximately fifty pounds of crushed stone chips per square yard between the two applications of bituminous material, and 35 to 40 pounds of chips per square yard after the final application of bituminous materials.

F. Untreated Surface

Where the existing surface is untreated gravel or stone, the contractor shall reuse all native materials possible using crushed stone as required, replacing the surfacing that is disturbed or removed with crushed stone equal to the grade present prior to construction.

Prior to final acceptance the Contractor shall fill in all depressions with crushed stone as hereinbefore specified, and shall thoroughly roll and grade to the existing surface.

G. General

The Contractor shall be held responsible for any and all damage occurring to street and road paving due to his operations outside the actual limits of his work, and shall replace any such damage to as good, or better, condition than that which existed prior to the Contractor's operations and at no additional expense to the OWNER.

11. Concrete Kickers, Anchors, Cradles, and/or Encasement

Concrete kickers, anchors, cradles, and/or encasement of water lines shall be placed where and as shown on the plans, or as directed by the ENGINEER.

Concrete for anchors, kickers, cradle, and/or encasement shall be 2500 psi concrete and shall be mixed sufficiently wet to permit it to flow under the pipe to form a continuous bed. In tamping concrete, care shall be taken not to disturb the grade or line of the pipe, or to injure the joints. Concrete placed outside the specified limits or without authorization from the ENGINEER will not be subject to payment.

12. Pipe and Fittings for Water Lines

A. General

Pipe for water mains shall be nominal diameter and material indicated on the plans.

The pipe shall be as specified herein and shall be either PVC or ductile iron.

B. Fittings

Cast iron or ductile iron mechanical joint fittings shall be required for all sizes of PVC pipe and all sizes of ductile iron pipe. Cast iron or ductile iron mechanical joint fittings shall conform to AWWA specification C 110 and shall have a rated working pressure of 250 psi or 350 psi respectively. Ductile iron fittings used in PVC pipelines may be the compact style conforming to AWWA C153. Cast iron or

ductile iron fittings shall be furnished with a bituminous coating outside one mil thick and shall be cement mortar lined inside according to AWWA specification C 104.

Only high strength low alloy steel T-bolts shall be used with all mechanical joints including fittings, valves, etc. All fittings and T-Bolts shall be manufactured in the United States and shall be a brand acceptable to the ENGINEER.

Fittings shown on the plans are intended to convey the general configuration only. The Contractor shall be required to furnish fittings at each abrupt change (vertical or horizontal) in the pipeline alignment, as determined by the ENGINEER. The Contractor shall also be required to furnish any special gaskets, adaptors, etc. necessary for construction. All vertical bends shall include ROMAC Grip Ring restraining devices approved by the ENGINEER. Fittings shall be considered incidental to the pipeline construction and except as described hereinafter are not a separate pay item.

C. Ductile Iron Pipe

Ductile iron pipe shall conform to AWWA specifications C 150 and C 151 with a rated working pressure of 350 psi under the laying conditions and depth of cover specified herein. Thickness class shall be as indicated on the bid schedule. Thickness classes for larger sizes of pipe shall be as shown on the plans.

Ductile iron pipe shall be furnished with an outside bituminous coating approximately one mil thick and shall be cement mortar lined inside according to AWWA specification C 104.

The joints for ductile iron pipe shall be in accordance with AWWA specification C 111 and shall be the "push-on" type. The allowable deflection in each joint shall be a minimum of three degrees and gasket lubricant shall be used as recommended by the pipe manufacturer. In certain locations such as creek crossings and other critical situations, ductile iron pipe with restrained joints shall be employed. Unless otherwise specified or shown on the plans, joints shall be restrained by use of "Field Lok" gaskets as manufactured by U.S. Pipe and Foundry Co.

Ductile iron pipe shall be "Super Bell-tite" as manufactured by Clow Corp., "Tyton" as manufactured by U.S. Pipe and Foundry co., or approved equal.

D. Plastic (PVC) Pipe

Plastic pipe shall be polyvinyl chloride (PVC) and shall meet the requirements set forth by ASTM D1784 for Type 1, Grade 1. All plastic pipe shall bear the National

Sanitation Foundation Testing Laboratory seal for potable water. The pipe shall also meet the requirements of ASTM D-2241, ASTM D-3139, and all other specifications referred to therein.

In general and unless indicated otherwise on the plans, PVC pipe shall be Class 200 (SDR-21). However, in certain areas Class 250 (SDR-17) or Class 160 (SDR-26) PVC pipe may be required.

Provision shall be made for contraction and expansion at each joint with either twin gasketed couplings or integral bell joints. Gasket systems shall be Reiber or other locked-in type as approved by the ENGINEER. Twin gasketed couplings shall be rated for working pressure equal to that of pipe and shall be as manufactured by the pipe manufacturer.

PVC pipe shall be manufactured by a company that has made pipe in accordance with ASTM D-2241 under the brand name to be supplied on this project continuously over the previous eight (8) year period. Pipe shall be manufactured at a plant that has been owned, operated and controlled by the same manufacturing company and has produced PVC pipe in accordance with ASTM D-2241 as routine standard procedure for the last three (3) years. PVC pipe shall be Can-tex, Certainteed, E.T.I., J.M., Vulcan, or approved equal.

Pipe manufactured with Molecular Oriented Poly (vinyl) Chloride, PVC (MO), may be substituted for the PVC pipe described above. PVC (MO) pipe shall conform to ASTM F 1483 and shall be "Ultra-Blue" as manufactured by Extrusion Technologies, Inc.

Note special PVC and PVC (MO) pipe testing requirements, paragraph 13, Section 2, Detailed Specifications.

13. Gate Valves and Boxes

Gate valves shall comply with AWWA specification C 500 and shall be of the double disc, parallel seat type, iron body, non-rising stem and fully bronze mounted. Valves shall be suitable for water working pressures of 150 psi for sizes 16 inch or larger and 200 psi for sizes 12 inch and smaller. Valves shall be of standard manufacture and of the highest quality both as to materials and workmanship. Double disc gate valves shall be either the A-2380 series by Mueller Company or Style 67 by M & H Valve Company.

All gate valves shall be furnished with mechanical joint end connections, unless otherwise shown on the plans or specified herein. The end connections furnished shall be suitable for connection to standard Ductile iron pipe and PVC pipe using special gaskets.

All gate valves shall have the name or monogram of the manufacturer, the year the valve casting was made, the size of the valve, and the working water pressure cast on the body of the valve.

Unless otherwise indicated on the plans, all gate valves shall be provided with a 2-inch square operating nut and shall open by turning counterclockwise.

Valve boxes shall be cast iron, two piece, screw type 24" to 36" extension with drop covers marked "WATER" and they shall be set vertically, properly adjusted so that the cover will be in the same plane as the finished surface of the street or ground. The box shall have a 5 1/4" shaft. Valve boxes shall be as manufactured by Mueller, Clow, M & H, or an approved equal.

14. Tapping Sleeves and Valves

All tapping sleeves shall be cast iron.

Tapping sleeves for cast iron or ductile iron pipe shall be mechanical joint and shall be Mueller H615 or M & H Style 1174. Tapping sleeves for A.C. pipe shall be mechanical joint and shall be Mueller H-619 or approved equal. Tapping sleeves for PVC pipe shall be Mueller H-612 or Clow #F-6342.

Tapping valves shall meet the same general specifications as described herein for gate valves.

15. Blowoffs

Blowoff valves and appurtenances shall be constructed where shown on the general plans and as detailed on the standard detail sheet. Gate valves as specified hereinbefore shall be used in the blowoff assembly. Bends used in blowoff assemblies may be PVC with gasketed joints, as approved by the ENGINEER.

16. Meters, Meter Boxes and Meter Equipment

A. Water Meters (Also see Detail Specifications Section 3-Subsection 18)

All new water meters shall meet the requirements of the latest AWWA Standard Specification for Cold Water Meters-Displacement Type and shall be SR-11 Water Meters as manufactured by Sensus Technologies, Inc. Meters shall be guaranteed to perform as a minimum to AWWA repaired meter accuracy standards for 15 years from the date of shipment or the registration of 1,500,000 gallons, whichever occurs first.

Meters shall be housed in an all cast bronze maincase with hinged bronze cover and bronze register box. The meter register shall read in gallons and shall be sealed hermetically to prevent condensation and to keep out water and foreign materials. The meters shall be piston operated, shall be equipped with a synthetic polymer strainer, and shall be of the magnetic drive type. Bottom plates shall be synthetic polymer (frost proof).

The meter size (sizes) required are 5/8- x 3/4-inch through 2-inch, as shown on the bid form. Where larger meter sizes are required and SR-11 meters are not available, the Sensus SR meter shall be installed.

All water meters shall be tested for accuracy at the factory by personnel and equipment approved by the Kentucky Public Service Commission to perform such tests. Results and certification of these tests shall be forwarded to the ENGINEER prior to shipment of the meters.

B. Meter Boxes

Meter boxes shall be cylindrical with a height of 24 inches. The meter box diameter for 3/4 inch services shall be 18 inch for locations without regulators and 18 inch for locations with regulators. Boxes with a diameter of 20 inches shall be used for all 1 inch services.

Boxes shall be either a PVC "shell" meter box manufactured from SDR 51 PVC irrigation pipe as manufactured by Mueller Company.

Meter box covers shall be cast iron with locking lid using "large" pentagon bolts. Covers shall have a 18 inch or 20 inch inside diameter as required and a 1 1/2 inch lid opening. The lid shall be marked "Water Meter". Meter box covers shall be Type A31, Type A32, or Type A3 as manufactured by the Ford Meter Box Company.

Meter boxes and covers for meters larger than 1 inch shall be as shown on the standard detail sheet.

C. Meter Fittings

The necessary corporation stops, curb cocks, and all other fittings and accessories shall be furnished as indicated on the plans. Service clamps shall be Mueller Series H-134 and corporation stops shall be Mueller # H-15008.

For 3/4 inch services, yokes shall be Mueller #H-1404-2 except where a regulator is required and then yokes shall be Mueller #H-1404-012. All 1-inch yokes shall be #H-1404-2 (See detail sheet). All yokes shall include a lock wing stop and check

valve. Inlet connections shall be either #H-14227 or #H-14222 as required by the particular situation and all outlet connections shall be #H-14222. See the detail sheet for additional information regarding fittings for services.

Pressure regulators, where required, shall be Watts No. 223-HP-Z3. The adjusting screw on pressure regulators shall remain at the factory setting.

D. Service Connection Tubing (Main to Meter)

Service connection tubing shall be 3/4 inch or 1 inch plastic tubing of the length necessary to run a direct and continuous line from the main to the meter at property line. The service tubing shall be manufactured from very high molecular weight polyethylene (weight average molecular weight of 330,000) defined by ASTM D-1248 and PE 3408, Type III; the material cell classification shall be 355434C as defined by ASTM D-3350; and it shall bear the name of the National Sanitation Foundation Testing Laboratory Seal for potable water. Tubing dimensions shall be copper tubing size in accordance with the provisions of ASTM D-2737. Tubing shall be SDR 9, rated for 200 psi working pressure and shall be covered by a 50-year warranty. The service tubing shall be Phillips Driscopipe 5100, "Ultraline". Special care shall be taken to protect the service tubing (with earthen materials) from sharp and/or hard objects. Cover is to be at least 30 inches at all points. Rigid liners (inserts) shall be used with PE tubing where compression connections are made. Liners shall be stainless steel as manufactured by Mueller Co., part #504281 or #504385.

Where it is necessary to cross a street, highway, or railroad, the Contractor shall bore for service tubing to be installed under said highway, railroad, or street. Such service line shall be bored at least four feet under the surface. Open cutting of highways, streets, and roadways will be allowed only when it is impossible to bore. Road crossings for both 5/8" x 3/4" and 1" meters shall be made with 1" tubing as shown on the detail sheet.

E. Larger Services

Piping and fittings for 1-1/2 inch and 2-inch services shall be as shown on the detail sheet. PVC pipe for services shall be Schedule 40 with rubber compression gasket joints. Schedule 40 PVC pipe shall be approved by the National Sanitation Foundation for potable water service.

F. Special Service Line Crossing

Where two 5/8 x 3/4 inch meters are to be set side-by-side across a highway or street from the water main, the Contractor shall install one special service line crossing to

supply both meters. These crossings shall include a 1-inch IP x PE curb stop with box with all additional brass fittings as shown on the detail sheet and shall be paid for as regular 1-inch service tubing by bore and open cut as described hereinafter.

17. Highway and/or Railroad Crossings (Water Mains)

All water line crossings of County, State and United States Highways, and or railroads, shall be in smooth wall steel casing pipe (0.25" minimum wall thickness). Joints in casing pipe shall be welded continuously all around. Crossings shall have a minimum depth cover of three feet, as measured from the top of the casing pipe to the low point of the crossing cross section.

Carrier pipe used inside steel casing shall generally be the material shown on the plans for the pipeline outside the casing; except where PVC carrier pipe is used, the minimum pressure rating shall be Class 200. The carrier pipe shall be supported on casing spacers (Advance, Calpico or approved equal) inside the casing in accordance with the spacer manufacturer's recommendations.

18. Inspection of the Lines

Before the Contractor backfills any of the lines, they first shall be inspected by the ENGINEER'S Representative and the ENGINEER'S Representative shall give the Contractor permission to proceed with the backfilling. If any joints, pipes, fittings, or materials or workmanship are found to be defective, they shall be removed and replaced by the Contractor without any additional compensation.

19. Connecting to the Existing Lines

Work under this item shall include the connecting of new water lines to the existing water lines in the manner shown in the plans, and as directed by the ENGINEER. The work of connecting new lines to existing lines is not a separate pay item under this contract.

Where such a connection will result in an interruption of service, the Contractor shall propose the schedule for such a connection to the ENGINEER several days in advance. The ENGINEER will present the proposal to the owner for approval. The interest of the OWNER in regards to service to existing customers shall take precedence over the new construction. The Contractor's Schedule shall permit the OWNER to provide notification to customers at least 24 hours before the suspension of service.

20. Disinfection and Flushing of the Lines

The new water lines shall not be placed in service either temporarily or permanently until they have been disinfected thoroughly in accordance with the following requirements to the

satisfaction of the ENGINEER.

After Pressure testing procedures have been completed, the Contractor shall flush the line thoroughly, removing all foreign material, dirt, etc. Then a solution of hypochlorite using HTH or equal, sufficient to insure a chlorine dosage of at least 50 parts per million through the entire length of the line.

The chlorine solution shall remain in the line 24 hours and a residual of at least 25 parts per million should be present in the pipe at the end of the 24-hour period. The line shall be flushed until two parts per million chlorine residual remains, then bacteriological samples taken. One sample shall be taken per mile of pipeline with a minimum of two samples per line. Each sample shall be collected from a different point along the line. If negative samples are obtained, the lines may be put into service. If a positive sample is obtained however, the disinfection procedure shall be repeated until negative samples are obtained. Bacteriological test costs shall be paid by the Contractor.

Disinfection, pressure testing, other required testing and flushing are not pay items. The Contractor shall pay for all water used for testing, disinfection, and flushing, except the amount required to fill the pipelines twice. This amount will be computed and deducted from the total amount metered.

The Contractor shall install a temporary bypass with the meter around a valve at the point connection to the existing water system. This meter will be for the purpose of measuring water used by the Contractor for flushing, testing, and disinfecting the new water lines. The meter shall be large enough to pass the required flows. It shall be tested for accuracy before being installed.

21. Rough Grade Work and Cleanup

Rough Grade Work and Cleanup (Rough Cleanup) shall be defined to include the final backfill and windrowing of the ditch line, filling and leveling street and driveway cuts, cleaning up and removal of rubbish, repair of fences and structures, and any other such work that may be required to result in a neat, orderly project area. Rough Cleanup shall be performed as other construction progresses and must be completed within one week of the adjacent pipeline construction.

Rough Cleanup is not a separate pay item. The cost for this work shall be included in the unit bid price for waterlines. If Rough Cleanup is not performed as specified, the OWNER will require deductions from partial payment estimates in accordance with the Supplemental General Conditions, Sections 3.3.

22. Final Cleanup

Final cleanup, grade work and seeding shall be performed on each line when backfilled trenches have had adequate time to settle, but at least within 2 months from the date each line is constructed. Final grade work and seeding on Kentucky Bureau of Highways rights-of-way shall be done in accordance with said Bureau's specifications and the permit granted to the OWNER specifically for this project.

Where work was performed on private property in lawns, earth of good quality, free from rock shall be spread over the disturbed area and graded and compacted to match adjacent ground contours. The graded area shall be hand raked until smooth and free from rock, potholes, and humps. The disturbed area shall then be seeded with the seed variety used on the original lawn (e.g., a bluegrass lawn shall be reseeded with bluegrass seed) and the seed raked in lightly. The seeded area shall be fertilized and then uniformly covered with straw to a depth of approximately 1-1/2 inches.

Where work was performed on private property and not in lawns the trench line shall be graded and filled if necessary to match adjacent contours. All rock larger than 1-1/2" in diameter shall be removed from the disturbed area. In general, pasture and fallow land shall be fertilized and seeded with Kentucky 31 Fescue and plowed fields shall be left unseeded, however, the desire of each property owner shall govern regarding seeding. Disturbed areas not in lawns are not required to be strawed unless erosion problems are anticipated by the ENGINEER.

In all cases on private property the rate of seed and fertilizer application shall be that recommended by the University of Kentucky Cooperative Extension Service for new plantings of the variety of grass seed used.

If the trench line settles following final grade work or if grass seed fails to germinate within a reasonable time, the Contractor shall regrade or reseed the area in question as specified above and as directed by the ENGINEER.

LONE HILL PACKAGED WATER-SHED BOOSTER PUMPING STATION  
(CONTRACT 1)

1. SCOPE OF WORK

The contractor shall furnish and install one (1) factory built, factory delivered, above ground water booster pump station, with all the necessary internal piping, pumps, motors, valves, and controls and other necessary appurtenances installed on a fabricated steel base and enclosed in a modular structure as shown on the plans and as specified herein. The above ground water booster station shall be complete when delivered and will not require internal contractor construction except to install the power service through the service conduit provided for that purpose.

The above ground water booster pump station shall be equalivent in all aspects as manufactured by Engineered Fluid, Inc. (EFI), Centralia, Illinois, represented by Delaney & Associates, Inc., telephone 606-342-4944.

2. QUALITY ASSURANCE

The equipment and materials covered by these specifications are intended to be standard equipment of proven reliability and as manufactured by reputable manufacturers having experience in the production of such equipment. The equipment furnished shall be designed, constructed, and installed in accordance with the best practices and methods and shall operate satisfactorily when installed as shown on the contract drawings and operated per manufacturer's recommendations.

It is intended that the manufacturer of the selected equipment shall be a business regularly engaged in the manufacture, assembly, construction, start-up and maintenance of water distribution equipment of the type required for this project. The manufacturer shall have at least ten (10) years of successful experience in providing stations of the type, design, function and quality as required for this project. As such, the pump station manufacturer shall be required to affix an **UNDERWRITERS LABORATORIES (UL) LABEL** attesting to the compliance of that assembled equipment under the **PACKAGED PUMPING SYSTEMS (QCZJ) UL Listing Category**. This label shall be inclusive of the entire station with enclosure so as to demonstrate compliance with the National Electrical Code requirements for working clearances and wiring procedures. **Equipment manufactured without this third party certification label or equipment manufactured by an outside source or "brokered equipment" defined as systems not assembled on the premises of the named manufacturer by that company's employees WILL NOT be allowed.**

3. SUBMITTAL

Equipment submittals shall be bound and in a minimum of six (6) copies. The submittals shall contain a minimum of two (2) full size drawings, size 24" x 36"; one (1) each covering the booster pump station and the electrical control schematic. The booster pump station drawing shall be specific to this project, in at least three (3) different views, be to scale and illustrate the National Electrical Code (NEC) clearances per Section 110-26 of the Code. The submittal booklets will be complete with data sheets covering all individual components that make up the booster pump station and the UL file number under which the manufacturer is listed, service department personnel statement as detailed in the specifications and be complete with the manufacturer's formal warranty policy. **The submittal booklets shall be complete with a full size photocopy of the manufacturer's combination UL/manufacturer logo Packaged Pumping Systems label.**

Two (2) submittal reviews from alternate equipment manufacturers will be accomplished at no cost to the submitting contractor. However, all subsequent reviews will be charged to the submitting contractor at the design engineer's standard hourly billing rate.

4. EQUIPMENT ENCLOSURE

The equipment enclosure size as shown on the drawings for this project is appropriate for National Standard mandated clearances and for proper clearances above, below and around equipment to provide for safe servicing, removal and reinstallation of that equipment.

Likewise, the equipment hatches as shown shall be sized to provide eventual removal and replacement of any component within the station without altering the station to accomplish that task.

The drawing for this equipment illustrates centerline and clearance/maintenance dimensions about major equipment items. These dimensions are minimum. Dimensions less than those shown **will not** be accepted.

5. MODULAR STRUCTURES

The booster pump station will be complete with a factory assembled modular building affixed to the steel deck structure supporting the booster pumps as shown on the plans. The completed booster station shall be one (1) piece when delivered and require only off loading, installation on the prescribed foundation slab, pipe line hook up and electrical service to complete the installation. **FIELD ERECTED BUILDINGS WILL NOT BE ACCEPTABLE.**

A. The polyurethane foam core shall be classified by Underwriters Laboratories as having flame spread of 25 or lower and smoke generation of less than 450 when tested in accordance with ASTM E-84-76.

- B. All sidewall and ceiling panels shall consist of interior and exterior metal skins formed with steel dies and roll-form equipment and checked with gauges for uniformity and accuracy. Polyurethane shall be foamed-in-place (poured, not frothed) and, when completely heat-cured, shall bond to the metal skins to form a rigid 4" thick insulated panel. The overall coefficient of heat transfer ("U" factor) shall not exceed .033 (MINIMUM R-30) for 4" thick walls. The insulation must retain dimensional stability in an operating temperature range of -90°F (-67.7°C) to +250°F (121.1°C) dry heat. Panel insulation shall be 97% closed cell to prevent moisture absorption. **Rigid polystyrene sheets or blocks in lieu of the specified polyurethane insulating material will not be accepted.** To insure tight joints, panel edges must have foamed-in-place tongues and grooves.
- C. Panels shall be equipped with cam lock joining devices. The distance between locks shall not exceed 46". Each locking device shall consist of a cam-action, hooked locking arm placed in one panel, and a steel rod positioned in the adjoining panel, so that when the locking arm is rotated, the hook engages over the rod and draws the panels tightly together with cam action. The locking arms and steel rods shall be housed in individual steel pockets set into the panel. Press-fit caps shall be provided to close cam lock wrench holes. A cam lock wrench shall be supplied with the building.

6. EXTERIOR GAUGE AND FINISH

A minimum of .0179" (26 gauge) galvanized steel panel shall be furnished, protected by a sprayed and baked tan color polyester protective coating.

7. INTERIOR GAUGE AND FINISH

A minimum of .0179" (26 gauge) galvanized steel panel shall be furnished, protected by a sprayed and baked white color interior finish.

8. HINGED ENTRANCE DOORS

- A. Insulation shall consist of a nominal 2" thick foam polyurethane insulation core. Matching metal jambs shall be furnished to fit prefab panels without the use of any interior framing. Jamb members shall attach to panels with sheet metal screws. The door shall be supplied with weatherstripping and a wiper gasket.

Entrance opening shall be double doors with a clear opening size of 72" x 78".

- B. Hardware for Doors - Hardware shall be Best 300H Series Mortise lockset with satin chrome finish and deadbolt type locking assembly. Two (2) keys will be provided, on a key ring complete with the manufacturer's identification.
- C. Door Hinges - Each door shall have three (3) SOSS 450T tamperproof pinned butt hinges.

- D. Weatherproof Shields - All doors for outdoor structures shall be supplied with a metal shield above the door to divert rain and snow from the door opening.
- E. Sillplates - An extruded aluminum sillplate shall be provided on outdoor buildings.

MEMBRANE ROOF SYSTEM - A single piece, EPDM rubber membrane shall be installed to provide a waterproof covering for the ceiling panels. The roofing system shall be a minimum thickness of 45 mil, capable of withstanding 80 MPH wind velocity, and white in color to accentuate reflection of heat.

BUILDING SIZE - As shown on the plans for this item.

The skid shall be constructed of C8x11.5 channels and 8x4x1/4 inch structural tubing as shown on the drawing. The floor plate shall be 1/4 inch steel.

The station shall have floor drains as shown on the drawing.

FLOOR MATTING - The walkway areas (that space from the entrance to the control panel and the entire NEC clearance area) shall be covered with a Nyracord industrial safety matting. The mat shall be a heavy duty, 1/2 inch minimum thickness Nyracord compound (rubber blend with fiber reinforcement) of open slot design with a ribbed safety pattern (ribbed in two directions) to promote sure footing. The underside of the safety mat shall also be ribbed (in one direction only) to permit aeration and drainage. The safety mat shall not be glued to the floor surface.

LIFTING DEVICE - An adjustable spreader type lifting device, built to lift the modular building structure without impinging the lifting chains/cables on the modular building sidewalls, shall be provided by the pumping station manufacturer for use by the installing contractor for the purpose of unloading station from trailer.

## 9. CORROSION PROTECTION

All surfaces of the exposed steel structure, interior and exterior, shall be gritblasted equal to commercial blast cleaning (SSPC-SP6).

The protective coating shall take place immediately after surface preparation. The protective coating shall be Tnemec Series 66 Hi-Build Epoxoline consisting of a two-component, high solids, amide-cured epoxy system formulated for high build application having excellent chemical and corrosion resistant properties. The epoxy system shall be self-priming and require no intermediate coatings. The protective coating shall provide in two (2) applications a total dry mil thickness of 8.0 mils.

## 10. HYDRO-PNEUMATIC STORAGE

The equipment capsule shall be complete with two (2) diaphragm type hydro-pneumatic

ASME coded storage tanks. Each storage tank volume will be a minimum of 317 gallons with a maximum working pressure of 125 psi.

The hydro-pneumatic storage tank shall feature deep drawn steel upper and lower domes with side shell construction specifically designed for diaphragm type storage tanks. Storage tank welding shall be carefully done to eliminate rough spots and sharp edges. The storage tank base shall be designed so as to permit free airflow to prevent moisture from accumulating beneath the storage tank.

The hydro-pneumatic storage tank internals shall include two (2) separate pieces. The first piece shall be a heavy-duty butyl diaphragm that effectively separates the air chamber from the water chamber. The shape of the diaphragm shall conform exactly to the shell configuration and shall be of seamless construction meeting FDA requirements for potable water.

The second piece shall be a polypropylene liner that conforms exactly to the lower dome and acts as the water receptacle. Water shall never touch steel.

The polypropylene liner shall be 100% non-corrosive and will not be bonded to the steel shell wall or lower dome. A mechanical clamping ring shall permanently affix the diaphragm and the liner to the shell groove. The polypropylene liner shall be tested and accepted by the National Sanitation Foundation.

The Hydro-Pneumatic Storage Vessel shall be as manufactured by Amtrol, Well-X-Trol Model WX-350. Storage tanks without either or both diaphragm and liner will not be accepted.

11. OPERATING CONDITIONS

The pump station shall be capable of delivering [redacted] and heads when operating at 0 feet minimum

PUMPS #1 AND #2

Design GPM 58 @ 120 feet TDH;  
Maximum GPM 115 @ 80 feet TDH;  
Efficiency at design GPM 68%.

The pump driver shall be a standard, A.C. in the vertical extended shaft, normal thrust type 1 phase, 60 cycle, 240 volt electrical service.

↑  
ies  
Model #  
Wesself  
FXA  
1200  
9-7-99 C.W.C.

, of  
for

12. BOOSTER PUMPS - CENTRIFUGAL DIFFUSER TYPE, MULTI-STAGE - VERTICAL

The booster pumps employed within the booster pump station shall be of the vertical centrifugal diffuser type, multi-stage, designed specifically for low flow - high head operation. The pumps shall conform to the detailed specifications as set forth below and shall be equalivent to Grundfos Series C, Model CR16-30/2U.

PUMP - The pump suction/discharge chamber, motor stool and pump shaft coupling shall be constructed of cast iron. The impellers, pump shaft, diffuser chambers, outer discharge sleeve and impeller seal rings or seal ring retainers shall be constructed of stainless steel. The impellers shall be secured directly to the pump shaft by means of a stainless steel tapered split cone and locking nut or by a splined shaft arrangement. Intermediate and lower shaft bearings shall be bronze or tungsten carbide and ceramic. Pumps shall be equipped with a high temperature mechanical seal assembly with tungsten carbide seal faces mounted in stainless steel seal components.

MOTOR - The pump motor shall be sized to insure the pump is non-overloading when operating on the specified pump curve. The motor shall be of the horsepower, voltage, phase and cycle as shown on the drawings. Motor design shall be of the open drip proof with a Nema C face design operating at a nominal 3450 rpm with a minimum service factor of 1.15. Lower motor bearings shall be adequately sized to insure long motor life.

13. PUMP/MOTOR VIBRATION ISOLATION PADS

The pump/motor assembly shall be mounted to a fabricated steel base built specifically for the pump/motor to be mounted. Each mounting or attachment point shall be complete with a vibration isolation pad. The pad will be in two (2) parts, a 1/4" base layer followed by a 5/8" upper layer and be a nominal 2" x 2" square size for pump/motor combinations weighing up to 1500 pounds. The mounting or hold down bolts at each base attachment point shall be complete with washer of appropriate size made of the same material and thickness as the 5/8" upper layer pad.

14. ELASTOMER PIPE CONNECTOR

The inlet side of each booster pump shall include an elastomer connector to help isolate vibration and noise in the piping system. The elastomer connector shall be of single sphere design, constructed of neoprene and nylon with bias-ply tire reinforcing cord to provide a 225 psi working pressure rating to a minimum of 120°F. The elastomer connector shall pass through the plate steel flanges designed to grip the connector so the connector seals without gaskets when the flange bolts are drawn up.

A control joint limiting pipe connector movement shall be supplied with each pipe connector.

15. PIPING

Piping shall be steel and conform to material specification ASTM A-53(CW) for nominal pipe size four (4) inch and smaller and ASTM A-53(ERW) Grade B for nominal pipe size five (5) inches and larger. Steel butt-welding fittings shall conform to material specification ASTM A-234 Grade WPB and to the dimensions and tolerances of ANSI Standards B16.9 and B16.28 respectively.

Forged steel flanges shall conform to material specification ASTM A-105 Class 60 and/or ASTM A-181 for carbon steel forgings and to the dimensions and tolerances of ANSI Standards B16.5 as amended in 1992 for Class 150 and Class 300 flanges.

The piping sizes shall be as shown on the drawing.

Size 10 inch and below - Schedule 40

Size 12 inch and above - Standard weight (.375" wall)

All pipe welds shall be performed by certified welders employed by the pump station manufacturer. As part of the equipment submittal, the pump station manufacturer shall provide copies of the welding certificates of the employees who are to perform the pipe welds.

All piping surfaces shall be prepared by gritblasting, or other abrasive blasting, prior to any welds taking place. Piping of 5" diameter and smaller may be cut by saw. Piping of 6" diameter and larger shall be bevel cut, and Oxyfuel or Plasma-arc cutting techniques shall be used to assure and facilitate bevel pipe cuts. No saw cuts or other form of abrasive cut-offs are allowed on 6" and larger diameter pipe.

In all cases, short circuit transfer, spray transfer or pulse-arc transfer modes of the gas metal arc welding process shall be applied semi-automatically. When utilizing the short circuit mode, shielding gas consisting of 50% carbon dioxide and 50% argon gas shall be used. When utilizing the spray or pulse-arc transfer modes, a shielding gas consisting of 5% carbon dioxide and 95% argon shall be used. In all cases, welding wire with a minimum tensile strength of 70,000 psi shall be employed. All flange welds and butt welds of equal size pipe shall be a single continuous nonstop weld around the complete circumference of the pipe. Whenever possible, vertical up weld passes will be applied to all pipe welds. No vertical down weld passes will be allowed. Completed welding assemblies shall create no internal obstruction, restriction or create any unintended sources of water deflection.

Piping of six (6) inch diameter and larger shall require a minimum of two (2) weld passes to complete each weld. The first pass, or root pass, shall be applied at the bottom of the bevel cut using the short circuit transfer welding mode, and the second pass, or cap pass, shall be applied over the root pass using the spray or pulse arc transfer welding modes to insure that at a minimum the total weld thickness shall be equal to thinnest of the two pieces being welded together.

16. PIPE SUPPORTS

Pipe supports by minimum sizing for:

- 4" and smaller piping shall be 2" x 2" x 3/16" wall rectangular tubing;
- 6" through 12" piping shall be 3" x 3" x 1/4" wall rectangular tubing;
- 14" through 24" piping shall be 4" x 4" x 1/4" wall rectangular tubing and, also;
- 6" and larger piping shall be provided with "kick" bracing projecting fully from the underside of the pipe to the floor at an angle of no less than 15° from vertical out at a right angle to the run of the pipe being supported. These "kick" braces shall be in addition to the vertical pipe supports called out above.

Pipe supports are to be fully welded at both end points to the pipe and steel floor where required.

**Simple pipe stands made of pipe welded only at the floor and upholding a yoke or bracket with or without a threaded jack bolt or a U-bolt are not acceptable, as no lateral or transverse support is provided.**

17. FUSION BONDED EPOXY COATING - STEEL TRANSMISSION PIPING

Steel transmission piping shall have applied to it a Fusion Bonded Epoxy Coating on the interior pipe surface that conforms to AWWA C-213-91 for steel water pipelines. The powder coating product shall be National Sanitation Foundation (NSF) Standard 61 certified material. The final product shall be capable of meeting Salt Spray Resistance ASTM B117 (1000 hour) with no blistering, undercutting or rust bleed; Humidity Resistance ASTM D2247 (1000 hour) with no blistering, undercutting or rust bleed; and Impact Resistance of ASTM G14-72 (160 in. lbs.). The Fusion Bonded Epoxy Coating shall provide a total dry mil thickness of 12.0 to 16.0 mils.

Prior to shipment of the station, the station manufacturer shall provide in writing to the Engineer certification that the proper fusion bonded epoxy coating has been applied to all internal surfaces of the steel piping using the proper method. Said certification shall show under the station manufacturer's letterhead:

- Date of application;
- Material manufacturer and product designation including a product data sheet for the coating;
- Applier of the fusion bonded coating, name, address and phone number;
- Notarized signature of an officer of the station manufacturing company stating the fusion bonded epoxy coating was applied to AWWA Standard C213-91 or the latest revision.

18. SERVICE CONNECTIONS ON INTERNAL PIPING

All plumbed devices within the station eventually requiring service, such as meters, control valves, pumps and like equipment, shall be easily removed from the piping by the presence of appropriately placed and sufficient quantity of adaptors and couplings as shown on the drawings; no less than the quantity of couplings and adaptors shown shall be allowed.

19. RESTRAINING POINTS

The main inlet and outlet piping to the station shall each be provided with two (2) or four (4) restraining points as welded on "eyes" or similar device welded to the framing to facilitate the attachment of joint restraint tie rods or other device to be used in retarding any pipe movement at the connections.

20. COMPRESSION COUPLINGS

The booster station piping shall include a compression type, flexible coupling to prevent binding and facilitate removal of associated equipment where shown on the plans for this item. In lieu of a compression coupling, a Uni-Flange or a flanged coupling adapter (FCA) may be used.

All compression couplings, Uni-Flanges, flanged coupling adapters (FCA), and flexible connectors/expansion joints shall include a minimum of two (2) control joint rods with gusset plates.

21. COMBINATION PRESSURE GAUGES

Combination pressure gauges shall be glycerine filled with a built-in pressure snubber and have 4-1/2 inch minimum diameter faces and be turret style, black phenolic case with clear glass face. The movement shall be rotary, of 400 Series stainless steel with teflon coated pinion gear and segment. The gauge shall be bottom connected and accept a 1/4" NPT female thread. Combination pressure gauge range and scale graduations shall be in psi and feet of water as follows:

INLET PRESSURE - 0 to 100 psi, 10 psi figure intervals, with graduating marks every 1 psi (0-230 feet).

OUTLET PRESSURE - 0 to 200 psi, 20 psi figure intervals, with graduating marks every 2 psi (0-460 feet).

All gauges will be panel mounted off the pipeline and be flexible connected to their respective sensing point. The gauge trim tubing shall be complete with both isolating and vent valves and the tubing shall be so arranged as to easily vent air and facilitate gauge removal. Gauges mounted directly to the pipeline or at the sensing point **will not** be accepted.

MANUFACTURER - Ashcroft Model 1279ASL.

22. SAMPLE TAP

A single, right angle outlet, smooth nose, brass sample tap shall be affixed to the manual vent ball valve for the low suction lockout and suction pressure gauge assembly.

23. BUTTERFLY VALVES

Valve body shall be wafer style and meet ANSI Class 125/150 flange standards. Metal reinforced dovetail seat shall ensure drop tight, bi-directional shutoff and shall be field replaceable. The stem shall be one piece. The disc and stem shall be connected by a stainless steel torque plug which shall provide positive engagement. The valve shall have upper and lower RTFE inboard stem bearings, isolated from the line media, and a heavy-duty upper stem bushing.

The valve body shall be cast iron; aluminum bronze disc; stainless steel stem; EPDM seat; acetal upper stem bushing; BUNA-N V-cup stem seal.

Valve sized six (6) inches and smaller shall be equipped with lever operator and 10 degree increment throttling plate. Valve sized eight (8) inches and larger shall be equipped with a weather-proof, heavy-duty, gear operator complete with a position indicator.

**BUTTERFLY VALVES SHALL BE EQUALIVENT TO KEYSTONE MODEL 221.**

24. NON-SLAM CHECK VALVES

Each pump discharge pipe run shall include a wafer-type, non-slam check valve. The body of the check valve shall be cast iron. The plug and seat shall be bronze and conform to ASTM Designation B-584. The seat shall contain a Buna-N seal to provide zero leakage. The seal design shall provide for both a metal to metal low and high pressure without over-loading or damaging the Buna-N seal. The guide bushings shall be bronze copper alloy and conform to ASTM Designation B-584. The valve spring and seat retainers shall be stainless steel and conform to ASTM Designation A-313. The valve plug shall be guided at both ends by a center shaft integral with the valve plug. Alignment of the center shaft shall be provided by guide bushings.

**CHECK VALVES SHALL BE EQUALIVENT TO VAL-MATIC MODEL 1402-BN.**

25. SUCTION LINE STRAINERS

The common suction header pipe run shall include a semi-steel basket type flanged strainer of a size as shown on the plans. The flange pattern shall conform to 125 pound ANSI standards. The strainer body and cover material shall be hi-grade cast iron equal to ASTM specification A126-61T Class B. The strainer cover will be complete with strong-back clamp device for quick easy access to strainer basket.

**THE STRAINERS SHALL BE EQUALIVENT TO METRAFLEX STYLE B-1-T.**

26. GATE VALVES

Isolating valves where shown and as sized on the plan sheet covering this item shall be gate valves meeting or exceeding ASTM Spec B283 No. C37700. The gate valves will be forged brass body, integral seat, NRS (non-rising stem) solid wedge disc. The valves will be NPT threaded pattern complete with handwheel operators (counter-clockwise). Maximum working pressure shall be 200 psi.

**THE GATE VALVES SHALL BE EQUALIVENT TO HAMMOND MODEL #667.**

27. PRESSURE TESTING

When the station plumbing is completed, the pressure piping within the station, including valves, pumps, control valves, fittings, connections as make up the entire system shall be hydrostatically tested at a pressure of 100 psi or a pressure equal to the lowest test pressure rating of the equipment within the tested system, whichever is greater pressure. The test pressure shall be applied for a minimum of 20 minutes, during which time all joints, connections and seams shall be checked for leaking. Any deficiencies found shall be repaired and the system shall be retested.

**The results of this testing shall be transmitted in writing to the Engineer prior to shipment of the station and shall note test pressure, time at full pressure and be signed by the Quality Control Manager or test technician.**

28. ELECTRICAL APPARATUS - DESIGN, ASSEMBLY & TEST

The electrical apparatus and control panel design, assembly, and installation, and the integration of component parts will be the responsibility of the manufacturer of record for this booster pumping equipment. That manufacturer shall maintain at his regular place of business a complete electrical design, assembly and test facility to assure continuity of electrical design with equipment application. Control panels designed, assembled or tested at other than the regular production facilities or by other than the regular production employees of the manufacturer of record for this booster pumping equipment **will not** be approved.

29. CONFORMANCE TO BASIC ELECTRICAL STANDARDS

The manufacturer of electrical control panels and their mounting and installation shall be done in strict accordance with the requirements of UL Standard 508 and the National Electrical Code (NEC) latest revision so as to afford a measure of security as to the ability of the eventual owner to safely operate the equipment. **No exceptions to the requirements of these codes and standards will be allowed; failure to meet these requirements will be cause to remove the equipment and correct the violation.**

30. U.L. LISTING

All service entrance, power distribution, control and starting equipment panels shall be constructed and installed in strict accordance with Underwriters Laboratories (UL) Standard 508 "Industrial Control Equipment." The UL label shall also include an SE "Service Entrance" rating stating that the main distribution panel is suitable for use as service entrance equipment. The panels shall be shop inspected by UL, or constructed in a UL recognized facility. All panels shall bear a serialized UL label indicating acceptance under Standard 508 and under Enclosed Industrial Control Panel or Service Equipment Panel. In addition, a photocopy of the UL labels for this specific project shall be transmitted to both the project engineer and the contractor for installation within their permanent project files, **prior to shipment of the equipment covered under these specifications.**

31. EQUIPMENT GROUNDING

Each electrical equipment item in the station shall be properly grounded per Section 250 of the National Electrical Code. Items to be grounded include, but are not limited to, pump motor frames, control panel, transformer, convenience receptacles, dedicated receptacle for heater, air conditioner, dehumidifier, lights, light switch, exhaust fans and pressure switches.

All ground wires from installed equipment shall be in conduit and shall lead back to the control panel to a copper ground buss specific for grounding purposes and so labeled. The ground buss shall be complete with a lug large enough to accept the installing electrician's bare copper earth ground wire. The bus shall serve as a bond between the earth ground and the equipment ground wires.

32. PANEL MOUNTING HARDWARE

Metal framing channel shall be used exclusively for mounting of all electrical panels and electrical components except for those specifically designated otherwise.

33. ELECTRICAL APPARATUS - CONTROL PANEL

**All circuit breakers, motor starters, time delay relays and control relays shall be incorporated into one (1) NEMA I control panel.** The electrical service provided for this station will be 240 volt, 1 phase, 60 cycle, 3 wire.

There shall be provided, thermal-magnetic trip circuit breakers as follows:

One (1) Main Breaker, 100 amps;

Two (2) Branch Breakers, one each per pump, 60 amps;

Nine (9) Auxiliary Circuit Breakers, as follows:

- |                    |                        |
|--------------------|------------------------|
| 1. Controls        | 6. Exhaust Fan         |
| 2. Lights          | 7. Convenience Outlets |
| 3. Heater          | 8. Telemetry           |
| 4. Air Conditioner | 9. Spare               |
| 5. Dehumidifier    |                        |

Pump starting equipment shall be single (1) phase, full voltage magnetic starters connecting the pump motor directly across the line, complete with manually reset overload relay with correctly sized heater elements on each line.

Automatic pump alternation shall be provided through a solid state sequence relay. The relay shall be enclosed in a plastic cover and shall plug into an eight (8) terminal socket. Control wiring for the sequence relay shall terminate at the socket. Replacement of the alternator shall not disturb control wiring. The relay shall include an automatic sequencing feature plus an option of locking the relay into one sequence. This option is provided by a 3-position switch that permits normal alternating action or locking in either lead/lag sequence. **Automatic start of the backup pump upon lead pump failure shall be provided.**

A running time meter shall be supplied for each pump to show the number of hours of operation. The meter shall be enclosed in a dust and moisture proof molded plastic case, suitable for flush mounting on the main control panel. The meter dial shall register in hours and tenths of hours up to 99999.9 hours before repeating. The meter shall be suitable for operation from a 115 volt, 60 cycle supply.

A secondary surge arrestor shall be provided. Housing shall be Noryl and be ultrasonically sealed. Valve blocks shall be silicon carbide with an insulating ceramic collar. Gap design shall be annular. The lead wire shall be permanently crimped to the upper electrode forming part of the gap structure. Arrestors shall be UL and CSA listed Lightning Protective Devices.

#### 34. ELECTRICAL APPARATUS - SUCTION PRESSURE CONTROL

Suction control of the pumping operation shall be provided by a bellows type, adjustable differential pressure switch. The switch shall be complete with a single pole, double throw contact block with 5 amp non-inductive rated contacts at 240 volts AC. The set points of the on/off cycle shall be independently adjustable through the full range of the switch rating.

1. Low Suction Cut-out, 4-150 psi.
- 1A. Adjustable Differential, 2-25 psi.

A pressure gauge shall be sub-panel mounted adjacent to the low suction pressure switch. The gauge and switch shall be so plumbed with the suction header sensing line that a common blow-off valve can relieve pressure in both simultaneously for purposes of checking and calibrating the low suction lock-out.

35. ELECTRICAL APPARATUS - LOCAL PRESSURE CONTROL

Control of the pumps shall be provided by bellows type, adjustable differential pressure switches. Each switch assembly will be complete with a single pole, double throw contact block with 5 amp non-inductive rated contacts at 240 volts AC. The set points of the on/off cycle shall be independently adjustable through the full range of the switch rating.

1. Start Lead Pump, 4-150 psi control range.
  - 1A. Adjustable Differential, 2-25 psi.
2. Start Back-up Pump, 4-150 psi control range.
  - 2A. Adjustable Differential, 2-25 psi.

A pressure gauge shall be sub-panel mounted adjacent to the discharge pressure switches. The gauge and switches shall be so plumbed with the discharge header sensing line that a common blow-off valve can relieve pressure in all simultaneously for purposes of checking and calibrating the start-stop functions of the pumps.

36. ELECTRICAL APPARATUS - FUTURE TELEMETRY CONTROL - INTERFACE PANEL

It will be the responsibility of the booster station manufacturer to provide the following as an adjunct to the supplied telemetry equipment.

1. 3/4" telemetry entrance conduit complete to telemetry interface panel.
2. Size 12" x 12" NEMA 1 telemetry interface panel.
3. Separate 120 volt single phase power circuit in conduit to the telemetry interface panel.
4. Telemetry control circuits made up and in conduit from main control panel to telemetry interface panel terminal strip.
5. Metal framing channel to mount telemetry equipment.

37. ELECTRICAL APPARATUS - ALARMS

The following alarms/status points shall be included within the booster pump station:

1. Unauthorized entry alarm
2. Pump status/fail alarm
3. Power fail alarm
4. Low suction alarm
5. Water within station alarm

The unauthorized entry alarm shall be a 120 volt AC circuit driven by a door mounted limit switch. The limit switch shall be the adjustable arm, roller contactor type which makes an internal SPST micro switch. The switch will be so mounted as to activate anytime the entrance door is opened. The unauthorized entry alarm circuit shall be complete with a time delay relay, 0-180 seconds minimum and manual alarm lock out key switch. The alarm circuitry will be set up to activate every time the entrance door is opened after a time delay period has lapsed. The engagement of the key switch will lock out the alarm.

The pump fail alarms shall be provided by a motor starter auxiliary contact to indicate pump status.

The power fail alarm shall be provided by 120 volt AC relay.

The low suction pressure alarm shall be provided by the low suction lockout pressure switch as described elsewhere.

The water alarm shall be a 120 volt AC circuit driven by a float switch wall mounted within the equipment capsule. The float switch shall be of the magnetic float type with the float moving up and down a guide tube. One-half inch (1/2") of float movement shall actuate the SPST reed type switch inside the guide tube. The switch shall be so mounted that when water reaches a point one (1) inch above the sump the float switch will activate the alarm. The alarm will be sealed in through an auxiliary relay and will be manually reset via a push button station.

#### 38. ELECTRICAL APPARATUS - DEVICES

Five (5) solid state time delay relays shall be provided to perform the following functions:

1. Low Suction Timer
2. Start Control Timer Pump #1
3. Stop Control Timer Pump #1
4. Start Control Timer Pump #2
5. Stop Control Timer Pump #2

The solid state time delay relay shall have an adjustable time range of 10 seconds to 10 minutes. The relays shall be constructed to use a DIN rail mount socket so that the relays can be replaced without disturbing the wiring. The relay shall be complete with LED indicators for output and power.

Hand-Off-Automatic switches shall be oil tight, 3-position maintained and be located on the main control panel door.

1. Pump #1
2. Pump #2
3. Exhaust Fan

#### 4. Telemetry Test

Indicating lights shall be oil tight, with a full voltage pilot light and be provided:

1. Red - Low Suction Pressure
2. Green - Pump #1 in Operation
3. Green - Pump #2 in Operation

Nameplates shall be furnished on all panel front mounted switches and lights.

The control panel door shall be complete on the interior with a stick-on transparency containing an "as-built" reproduction of the electrical control panel schematic. The wiring diagram shall be a corrected "as-built" copy and contain individual wire numbers, circuit breaker numbers, switch designations and control function explanations.

#### 39. CONDUIT, WIRING, RECEPTACLES AND LIGHTING

Rigid conduit, sized to adequately accept the inbound service conductors, and/or telemetry or telephone cables, shall be installed from the main power or control panel through the equipment enclosure floor and terminate exterior to the equipment enclosure. The service entrance conduit connections shall be plugged for shipment.

All wiring within the equipment enclosure and outside of the control panel or panels shall be run in conduit except for the watertight flexible conduit and fittings properly used to connect pump drivers, fan motors, solenoid valves, limit switches, etc., where flexible connections are best utilized. Only the dehumidifier where furnished by the original manufacturer with a UL approved rubber cord and plug, may be plugged into a receptacle.

**EQUIPMENT ENCLOSURE CONDUIT** - Rigid, heavy wall, Schedule 40 PVC with solvent weld moisture-proof connections adequately sized to handle the type, number and size of equipment conductors to be carried - in compliance with Article 347 of the National Electrical Code (NEC) and NEMA TC-2, Federal WC-1094A and UL-651 Underwriters Laboratories Specifications.

**FLEXIBLE CONNECTIONS** - Where flexible conduit connections are necessary, the conduit used shall be liquid-tight, flexible, totally nonmetallic, corrosion resistant, nonconductive, U.L. listed conduit sized to handle the type, number and size of equipment conductors to be carried - in compliance with Article 351 of the National Electrical Code.

**MOTOR CIRCUIT CONDUCTORS** - Sized for load. All branch circuit conductors supplying a single motor of one (1) horsepower or more shall have an ampacity of not less than 125 percent of the motor full load current rating, dual rated type THHN/THWN, as set forth in Article 310 and 430-B of the National Electrical Code, Schedule 310-13 for flame retardant, heat resistant thermoplastic, copper conductors in a nylon or equivalent outer covering.

CONTROL AND ACCESSORY WIRING - Sized for load, type MTW/AWM (Machine tool wire/appliance wiring material) as set forth in Article 310 and 670 of the National Electrical Code, Schedule 310-13 and NFPA Standard 79 for flame retardant, moisture, heat and oil resistant thermoplastic, copper conductors in compliance with NMTBA and as listed by Underwriters Laboratories (AWM), except where accessories are furnished with a manufacturer supplied UL approved rubber cord and plug.

RECEPTACLES - Two (2) duplex, ground fault circuit interrupter type receptacles shall be furnished about the periphery of the equipment enclosure, with one (1) receptacle adjacent to the main control panel.

LIGHTING - There shall be one or more two-tube, 40 watt per tube, rapid start, enclosed and gasketed, forty-eight (48) inch minimum length fluorescent light fixtures installed within the equipment enclosure, as shown on the plan for this item. One (1) light fixture shall be located directly over the main control panel. The light switch shall be of the night glow type and be located conveniently adjacent to the door. Open fluorescent or incandescent fixtures will not be accepted.

40. HEATER

1. One (1) each wall mounted as shown.
2. Rating - 10,239 BTU/HR - 3000 watts, 240 volt.
3. Enclosed resistance wire within steel finned element.
4. Control - off/heat/constant. /
5. UL listed.
6. Vane axial fan - floor flow discharge.
7. Hard wired in conduit per UL 400-1.

41. AIR CONDITIONER

1. One (1) each roof mounted, hard wired, as shown.
2. Super-durable, U-V resistant ABS plastic shroud.
3. Permanent washable polyurethane filter.
4. Built-in adjustable thermostat.
5. Safety recessed controls.
6. Three-speed fan with adjustable air flow direction.
7. Cooling capacity in tons: 1.00.
8. Rating - 11,000 BtuH at 115 volts.
9. Amps - 9.5.
10. SCFM, high speed maximum/minimum - 325/250.

42. EXHAUST FAN

1. One (1) each installed as shown.
2. Capacity each 232 cfm at .2 inch static pressure.

3. Shaded pole motor - squirrel cage blower.
4. Hard wired in conduit to conduit box on motor per UL 400-1.
5. 120 volt A.C. operation from wall mount thermostat and HAND/AUTO switch on main control panel.
6. When exhaust fans and an air conditioner or fan coil cooling unit are both used, the exhaust fans' control wiring shall contain relay contacts (normally closed) that open the exhaust fans' circuit whenever an air conditioner or fan coil cooling unit is in operation.

43. DEHUMIDIFIER

1. One (1) each installed as shown.
2. Capacity 25 pints per 24 hours (AHAM Standard DH-1).
3. Compressor rated 1/5 HP, 4.1 amps, 400 watts.
4. Condensate piped direct to sump.
5. 120 volt A.C. operation by dial-controlled adjustable humidistat.
6. UL listed rubber cord.

44. FACTORY START-UP SERVICE

1. Start-up service technician shall be a regular employee of booster station manufacturer.
2. As part of the submittal covering this equipment, list the factory service manager, his employee number, his telephone number with extension and his number of years with the company. List also each start-up service technician, his employee number and years of service with the company.
3. Verify that one (1) or more of the service technicians listed above will perform the required start-up service on the equipment covered in the submittal.
4. One (1) full day at job site for start-up and training.
5. Start-up service to include two (2) bound O&M manuals.
6. Start-up service report attested to by start-up technician and representative of owner or engineer.
7. Service report distributed to:
  - A. Manufacturer's File
  - B. Engineer's File
  - C. Contractor's File
  - D. Owner's File

45. WARRANTY

The warranty is the responsibility of the station manufacturer and that warranty shall be provided in written form to the contractor for inclusion with the submittal and said warranty shall at a minimum cover:

1. A period of one (1) year commencing upon **station acceptance** by the Owner and Engineer.
2. The one (1) year period shall be inviolate regardless of any component manufacturer's

warranty for equipment and components within the station.

3. The warranty shall cover all equipment, components and systems provided in or with the station.
4. The warranty shall provide for replacement and/or repair of faulty or defective components at no cost to the owner during the warranty period.
5. Where deemed necessary, the manufacturer will be responsible for the labor of removal and reinstalling the defective or faulty components without cost to the owner.
6. No assumption of contingent liabilities for any component failure during warranty is made.

46. GENERAL LIABILITY INSURANCE

The booster pump station manufacturer shall furnish premises/ operations and products/completed operations general liability insurance from an insurance company with a rating of A-V according to the most recent Best's Key Rating Guide, in an amount equal to \$10,000,000 per occurrence. The insurance certificate must be included with the manufacturer's submittal. The coverage must be provided by an insurance carrier licensed and admitted in the state of manufacture.

SECTION 5  
BASIS OF PAYMENT

1. General

The Contractor shall furnish all necessary labor, machinery, tools, apparatus, materials, equipment, services, and other necessary supplies, and do and perform all work including all excavation and backfilling (without additional compensation except where specifically set out in these specifications) at the unit or lump sum prices for the following items.

2. Tapping Sleeves, Valves and Boxes

Tapping sleeves are not a pay item. Cost to be included in the unit price bid for the water line. Valves will be paid for at the unit bid for gate valves.

3. Gate Valves and Boxes

Payment for furnishing and installing gate valves and boxes in the water lines of the sizes shown on the bid form will be made at the contract unit price per valve and box, complete in place as shown on the standard detail sheet.

4. Blowoffs

Payment for blowoffs (at end of line) will be made at the contract unit price per each complete in place as described. All appurtenances (gate valves, meter box, piping, fittings, concrete, etc.) are to be included in the unit price bid for a blowoff assembly.

5. Cased Highway Crossings

Payment for furnishing and installing (by boring or open cut as shown on the bid form) casing pipe for highway crossings will be made at the contract unit price per linear foot, complete in place, and shall include the casing pipe, end seals and casing spacers for the crossings as shown on the plans, as specified and as shown on the bid form.

6. Water Meters, Boxes, and Fittings

Payment for the installation of water meters, meter boxes, and fittings will be made at the contract unit price per each complete in place. This item includes tapping the main and

furnishing all new fittings required for connection to the new main. Only polyethylene service tubing beyond the amounts included in the price for meter settings shall be a separate pay item. Distinction will be made on the bid form for meter installations with and without pressure regulators. See Service Tubing below.

7. Polyethylene Service Tubing

Payment for furnishing and installing polyethylene service tubing of the sizes shown on the bid form by open cut or bore beyond the 10 feet and 70 feet that is included in the meter setting will be made at the contract unit price per linear foot, complete in place.

8. Crushed Stone for Pipe Bedding, Backfill, and/or Surface

Said material will be paid for at the contract unit price per ton, furnished and placed as specified. The contractor shall furnish the ENGINEER with a duplicate weight slip for all such material delivered at the job, but the pay quantities may be computed at the discretion of the ENGINEER using unit weight of stone and trench cross-section shown on standard detail sheets. No stone backfill shall be used unless specifically authorized by the ENGINEER as the ENGINEER will determine when stone is needed.

9. Bituminous Pavement

Bituminous pavement shall be paid for at the contract unit price per linear foot, complete in place, including primer.

10. Lone Hill Package Water-Shed Booster Pumping Station

Payment for package pumping stations complete in place and operating condition, as shown on the plans and as specified, shall be made at the contract lump sum price, including the piping and valves, pumps, equipment capsule, site grading, access road, electrical work at the site, and incidental items to result in a complete installation which operates as described in these specifications.

11. Water Lines

Payment for the construction of new water lines of the sizes and materials shown on the bid will be made at the contract unit price per linear foot, complete in place and in operating condition, including all fittings, testing, rough cleanup and final cleanup work.

12. Automatic Air Release Valves

Payment for Automatic Air Release Valves will be made at the contract unit price per each complete in place as shown on the standard detail sheet.

13. Crushed Stone for Trench Surfaces, #57

This item includes gravel for driveway replacement and will be made at the unit price bid per linear foot. Should driveway settle and require additional gravel this gravel will not be a pay item.

14. Crushed Stone for Trench Bedding and Backfill, #9-M

At the discretion of the ENGINEER stone for backfill may be required. This item will be paid at the unit price bid per ton required. All weigh slips must be given to ENGINEER.

15. Creek Crossings

D.I. pipe for creek crossings will be paid at the unit price bid per linear foot. Concrete for creek crossings will be paid at the unit price bid per cubic yard for the concrete. All weigh slips for concrete shall be given to the ENGINEER. Concrete anchors for creek crossings will also be paid for at the unit price bid for the concrete.

16. Summary

The above items, 2 through 15 inclusive, refer to and are the same items as listed in the Bid Form hereinafter, and constitute all of the pay items for these Contracts. Any other items of work listed in the specifications, or shown on the plans, shall be considered to be incidental to the above items.

CONTRACT I

GRAYSON COUNTY WATER DISTRICT  
PROJECT 11  
GRAYSON COUNTY, KENTUCKY  
JULY, 1999

Proposal of \_\_\_\_\_ (hereinafter called "BIDDER"), organized and existing under the laws of the State of \_\_\_\_\_ doing business as \_\_\_\_\_. \* To the \_\_\_\_\_ (hereinafter called "OWNER").

In compliance with your Advertisement for Bids, BIDDER hereby proposes to perform all work for the construction of \_\_\_\_\_ in strict accordance with the Contract Documents, within the time set forth therein, and at the prices stated below.

By submission of this bid, each BIDDER certifies, and in the case of a joint bid each party thereto certifies as to its own organization, that this bid has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this bid with any other BIDDER or with any competitor.

BIDDER hereby agrees to commence work under this contract on or before a date to be specified in the Notice to Proceed and to fully complete the project within 120 consecutive calendar days thereafter. BIDDER further agrees to pay as liquidated damages, the sum of \$250.00 for each consecutive calendar day that the work remains incomplete after the expiration date of the contract.

BIDDER acknowledges receipt of the following Addenda:

Addendum No. \_\_\_\_\_ Addendum No. \_\_\_\_\_ Addendum No. \_\_\_\_\_

The BIDDER hereby proposes to furnish and do all that is required by the contract to which this refers for the construction of all structures listed at the prices shown for each bid item on the following Bid Schedule. (The Bid Schedule attached lists the various divisions of construction contemplated in the Plans and Specifications, together with an estimate of the units of each. With these units as the basis, the BIDDER will extend each item, using the cost he inserts in the unit column. Any total cost found inconsistent with the unit cost when the bids are examined will be deemed in error and corrected to agree with the unit cost which shall be considered correct).

\*Insert "a corporation", "a partnership", or "an individual" as applicable.

The undersigned BIDDER does hereby declare and stipulate that this proposal is made in pursuance of and subject to all terms and conditions of the Instructions to Bidders, the Construction Contract, the Technical Specifications, and the Plans pertaining to the work to be done, all of which have been examined by the undersigned.

Accompanying this proposal is a certified check or standard bid bond (5% of the Total Bid) in the sum of \_\_\_\_\_ dollars (\$\_\_\_\_\_) in accordance with the Instructions to Bidders.

The undersigned BIDDER agrees to execute the contract and Performance and Payment Bond for the amount of the total of this bid within 10 calendar days from the date when the written Notice of Award of the contract is delivered to him at the address given in this proposal. The name and address of the corporate surety with which the BIDDER proposes to furnish the specified Performance and Payment Bond is as follows:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

All the various phases of work enumerated in the Technical Specifications with their individual jobs and overhead, whether specifically mentioned, included by implication or appurtenant thereto, are to be performed by the Contractor under one of the items listed in the Bid Schedule, irrespective of whether it is named in said list.

Payment for work performed will be in accordance with the Bid Schedule, subject to changes as provided for the Construction Contract.

The BIDDER understands that the OWNER reserves the right to reject any or all bids and to waive any informalities in the bidding.

The BIDDER agrees that this bid shall be good and may not be withdrawn for a period of 90 calendar days after the scheduled closing time for receiving bids.

Bids shall include sales tax and all other applicable taxes and fees.

BID SCHEDULE

<u>Item No.</u>	<u>Item</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Total</u>
1.	6" PVC Class 200 Pipe, SDR 21, furnishing, Trenching, Laying and Backfilling (Unclassified Excavation)	35,000	L.F.	_____	_____
2.	6" PVC Class 250 Pipe, SDR 17, Furnishing, Trenching, Laying and Backfilling (Unclassified Excavation)	3,300	L.F.	_____	_____
3.	4" PVC Class 200 Pipe, SDR 21, Furnishing, Trenching, Laying and Backfilling (Unclassified Excavation)	75,000	L.F.	_____	_____
4.	4" PVC Class 250 Pipe, SDR 17, Furnishing, Trenching, Laying, and backfilling (Unclassified Excavation)	10,000	L.F.	_____	_____
5.	4" DI Class 350 Pipe, Furnishing and Trenching, Laying and Backfilling (Unclassified Excavation)	400	L.F.	_____	_____
6.	10" Steel Cover Pipe, Furnishing and Installing Under state and county maintained roads, Including unclassified Boring and/or Jacking (Water Pipe not Included)	175	L.F.	_____	_____

Continued

<u>Item No.</u>	<u>Item</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Total</u>
7.	10" Steel Cover Pipe, Furnishing and Installing Under State and County Maintained Gravel Roads Including Unclassified Open Cut and #57 Crushed Stone Backfill (Water Pipe Not Included)	75	L.F.	_____	_____
8.	8" Steel Cover Pipe, Furnishing and Installing Under state and county maintained roads, Including unclassified Boring and/or Jacking (Water Pipe not Included)	275	L.F.	_____	_____
9.	8" Steel Cover Pipe, Furnishing and Installing Under state and county maintained gravel roads, Including unclassified open cut and #57 crushed stone backfill (Water Pipe not Included)	75	L.F.	_____	_____
10.	6" D.I. Creek Crossing Furnishing, Trenching, Laying and Backfilling with Crushed Stone (Concrete Not Included).	315	L.F.	_____	_____
11.	4" D.I. Creek Crossing Furnishing, Trenching, laying and backfilling with crushed stone. (Concrete Not Included)	255	L.F.	_____	_____
12.	6" C.I. AWWA NRS Gate Valve and Box, Conc. Pad, Complete in Place	11	Ea.	_____	_____
13.	4" C.I. AWWA NRS Gate Valve and Box, Conc. Pad, Complete in Place	26	Ea.	_____	_____

Continued

<u>Item No.</u>	<u>Item</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Total</u>
14.	Customer Services with 5/8" meter, opposite side of road as Main. 70 feet service tubing (Max.)	40	Ea.	_____	_____
15.	Customer Services with 5/8" meter, same side of road as Main, 10 feet service tubing (Max.)	40	Ea.	_____	_____
16.	Customer Services with 5/8" meter, pressure regulator, tandem copper setter, 21" vault, lid same side of road as Main, 10 feet service tubing (Max.)	40	Ea.	_____	_____
17.	Customer Services with 5/8" meter, Pressure Regulator, Tandem Copper setter, 21" vault, lid, opposite side of road as main, 70 feet service tubing (Maximum)	40	Ea.	_____	_____
18.	Additional 1" Service tubing, Furnishing, laying, trenching and backfilling where required in addition to maximum lengths included 14 through 17	1000	L.F.	_____	_____
19.	Additional 3/4" Service tubing, Furnishing, laying, trenching and backfilling where required in addition to maximum lengths included 14 through 17	1000	L.F.	_____	_____
20.	6" Blowoff Assembly Including gate valve, fittings, Concrete. As shown on standard details, complete in place	3	Ea.	_____	_____

Continued

<u>Item No.</u>	<u>Item</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Total</u>
21.	4" Blowoff Assembly Including Gate Valve, Fittings and Concrete, as shown on standard details, Complete in place.	11	Ea.	_____	_____
22.	Automatic Air Release Valve Assembly and box, Complete in place.	2	Ea.	_____	_____
23.	Packaged Water-Shed Booster Pumping Station, Foundation, Electrical, Site Work, Driveway, Valves, Piping, Fittings as Shown on the drawings and described in specification, Complete in Place.	1	L.S.	_____	_____
24.	#57 Crushed stone on trench surface at driveways, roadway crossings and streets	1,500	L.F.	_____	_____
25.	#9-M Crushed stone for trench bedding and backfill in Rock Excavation	1,500	Tons	_____	_____
26.	2500 psi concrete for use in Creek Crossings as shown on standard details and described in specifications	60	Cu. Yds.	_____	_____
27.	Bituminous Paving Replacement on non-state maintained roads, streets, and driveways	100	L.F.	_____	_____
TOTAL BID PRICE (Items 1 through 27)				\$	_____

\*Contractor shall note that the apparent low bidder shall be determined by the Total Bid Price of Items 1 through 27.

Method of Payment shall be by bid unit. Contractor should review the Standard Details and the Specifications, especially the Special Conditions, when bidding this project.

The above prices shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for, complete in place.

---

(Contractor)

(Date)

By \_\_\_\_\_

(Title)

---

(Business Address)

---

(Phone Number)

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned \_\_\_\_\_  
\_\_\_\_\_ as Principal, and \_\_\_\_\_  
\_\_\_\_\_ as Surety, are hereby held and firmly bound unto \_\_\_\_\_  
\_\_\_\_\_ as OWNER in the penal sum of \_\_\_\_\_  
\_\_\_\_\_ for the payment of which, well and truly  
to be made, we hereby jointly and severally bind ourselves, successors and assigns. Signed, this  
\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_.

The Condition of the above obligation is such that whereas the Principal has submitted to \_\_\_\_\_  
\_\_\_\_\_ a certain BID, attached hereto and hereby made a part hereof to enter into a contract in writing,  
for the \_\_\_\_\_  
\_\_\_\_\_

NOW, THEREFORE,

1. If said BID shall be rejected, or  
(b) If said BID shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attachment hereto (properly completed in accordance with said BID) and shall furnish a BOND for faithful performance of said contract, and for the payment of all persons performing labor, furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID, then this obligation shall be void, otherwise the same shall

remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

\_\_\_\_\_(L.S.)  
Principal

\_\_\_\_\_  
Surety

By: \_\_\_\_\_

IMPORTANT - Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

COMPLIANCE STATEMENT

This statement relates to a proposed contract with \_\_\_\_\_

\_\_\_\_\_  
(Name of borrower or grantee)

who expects to finance the contract with assistance from the Farmers Home Administration, United States Department of Agriculture, (whether by a loan, grant, loan insurance, guarantee, or other form of financial assistance). I am the undersigned bidder or prospective contractor. I represent that -----

1. I  have,  have not, participated in a previous contract or subcontract subject to executive order 11246 (regarding equal employment opportunity) or a preceding similar Executive order.
2. If I have participated in such a contract or subcontract, I  have,  have not, filed all compliance reports that I have been required to file in connection with the contract or subcontract.

If the proposed contract is for \$50,000 or more and I have 50 or more employees, I also represent that ---

3. I  have,  have not previously had contracts subject to the written affirmative action program requirements of the Secretary of Labor.
4. If I have participated in such a contract or subcontract, I  have,  have not, developed and placed on file at each establishment affirmative action programs as required by the rules and regulations of the Secretary of Labor.

I understand that if I have failed to file any compliance reports that have been required of me, I am not eligible and will not be eligible to have my bid considered or to enter into the proposed contract unless and until I make an arrangement regarding such reports that is satisfactory to the Farmers Home Administration or to the office where the reports are required to be filed.

I also certify that I do not maintain or provide for my employees any segregated facilities at any of my establishments, and that I do not permit my employees to perform their services at any location, under my control, where segregated facilities are maintained. I certify further that I will not maintain or provide for my employees any segregated facilities at any of my establishments, and that I will not permit my employees to perform their services at any location, under my control, where segregated facilities are maintained. I agree that a breach of this certification is a violation of the Equal Opportunity clause in my contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise. I further agree that (except where I have obtained identical certifications for proposed subcontractors for specific time periods) I will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause; that I will retain such certifications in my files; and that I will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods): (See Reverse).

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENTS FOR  
CERTIFICATIONS OF NON-SEGREGATED FACILITIES

A certification of Nonsegregated Facilities, as required by the May 9, 1967, order (32F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted prior to the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

Date \_\_\_\_\_

\_\_\_\_\_  
*Signature of Bidder or Prospective Contractor*

\_\_\_\_\_  
*Address (including Zip Code)*

CERTIFICATION FOR CONTRACTS, GRANTS AND LOANS

The undersigned certifies; to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant or Federal loan, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant or loan.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant or loan, the undersigned shall complete and submit Standard Form - LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including contracts, subcontracts, and subgrants under grants and loans) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

\_\_\_\_\_  
(name)

\_\_\_\_\_  
(date)

\_\_\_\_\_  
(title)

oOo



FMB

COMMONWEALTH OF KENTUCKY  
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET  
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

FRANKFORT OFFICE PARK  
14 REILLY RD  
FRANKFORT KY 40601

RECEIVED

SEP 27 1999

July 14, 1999

RECEIVED

JUL 20 1999

CC  
REB  
JEM

PUBLIC SERVICE  
COMMISSION

Grayson County Water District  
PO Box 217  
Leitchfield, Kentucky 42101

Haworth, Meyer & Boleyn

RE: DW #0430616-99-003  
Water System Improvements  
Project II - Cont. 1 & 2  
Grayson County, Kentucky

Dear Sirs:

We have reviewed the plans and specifications for the above referenced project. The plans include approximately 288,187 feet of 6-inch and 4-inch PVC water line. This is to advise that plans and specifications covering the above referenced subject are APPROVED with respect to sanitary features of design as of this date with the following stipulations:

1. If PVC piping is used, it must be NSF approved and manufactured in accordance with ASTM standards.
2. Upon completion of construction, disinfection shall be strictly in accordance with the procedure designated in the State Regulations, which reads as follows:

"A water distribution system, including storage distribution tanks, repaired portions of existing systems, or all extensions to existing systems, shall be thoroughly disinfected before being placed into service. A water distribution system shall disinfect with chlorine or chlorine compounds, in amounts as to produce a concentration of at least fifty (50) ppm and a residual of at least twenty-five (25) ppm at the end of 24-hours (24) and the disinfection shall be followed by a thorough flushing."



New or repaired water distribution lines shall not be placed into service until bacteriological samples taken at the points specified in 401 KAR 8:150 Section 4 (2) are examined and are shown to be negative following disinfection.

3. A minimum pressure of 30 psi must be available on the discharge side of all meters.
4. Water mains shall be laid at least 10 feet horizontally from any existing or proposed sewer. A sewer is defined as any conduit conveying fluids other than potable water. The distance shall be measured edge to edge. In cases where it is not practical to maintain a 10 foot separation, this office may allow deviation on a case-by-case basis, if supported by data from the design engineer. Such deviation may allow installation of the water main closer to a sewer, provided that the water main is laid in a separate trench or on an undisturbed shelf located on one side of the sewer at such an elevation that the bottom of the water main is at least 18 inches above the top of the sewer. This deviation will not be allowed for force mains.

Water mains crossing sewers shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. At crossings, one full length of the water pipe shall be located so both joints will be as far from the sewer as possible. Special structural support for the water and sewer pipes may be required.

5. At high points in water mains where air can accumulate provisions shall be made to remove the air by means of hydrants or air relief valves. Automatic air relief valves shall not be used in situations where flooding of the manhole or chamber may occur.

6. Hydropneumatic (pressure) tanks, when provided as only storage facility, are acceptable only in very small water systems. When serving more than 50 living units, ground or elevated storage shall be provided. Pressure tank storage systems shall not be considered as providing fire protection. Any hydrants shown on this system shall be for flushing purposes only.
7. When this project is completed, the owner shall submit a written certification to the Division of Water that the above referenced water supply facilities have been constructed and tested in accordance with the approved plans and specifications and the above stipulations. Such certification shall be signed by a registered professional engineer.

It is highly recommended that the hydraulic performance of any marginal pressure areas be monitored. Appropriate corrective action should be taken immediately if the level of service is inadequate or declining or the pressure to any customer falls below 30 psi.

If this water line project will cross a stream or wetland, the attached Water Quality Certification will apply. Please read this certification and make this a part of any contract to install the water lines. If you have any questions please contact John Dovak of the Water Quality Branch at 502/564-2225, extension 485.

Since the requirements of Administrative Regulations 401 KAR 4:050, Section 2 are met with regard to subfluvial pipe crossings, a floodplain construction permit will not be required pursuant to KRS 151.250 for this aspect of the project. Please note the reference to subfluvial pipe line crossings in the enclosed copy of the regulations.

This approval has been issued under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this approval does not relieve the applicant from the responsibility of obtaining any other approvals, permits or licenses required by this Cabinet and other state, federal and local agencies.

Project II - Contracts 1 & 2  
July 14, 1999  
Page three

Unless construction of this project is begun within one year from the date of approval, the approval shall expire. If you have any questions concerning this project, please contact Bob Arnett, PE at 502/564-2225, extension 578.

Sincerely,

*Thomas E Skaggs*

*for* Vicki L. Ray, Branch Manager  
Drinking Water Branch  
Division of Water

VLR:RNA:lm

Enclosures

C: Haworth, Meyer & Boleyn, Inc.  
Grayson County Health Department  
Public Service Commission  
Division of Plumbing  
Bowling Green Regional Office  
Water Quality Branch  
Water Resources Branch  
Drinking Water Files

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET  
Department for Environmental Protection  
Division of Water

**401 KAR 4:050. Construction exemptions.**

**RELATES TO:** KRS 151.110, 151.250, 151.310

**STATUTORY AUTHORITY:** KRS 151.230, 151.250

**NECESSITY AND FUNCTION:** In the course of regulating construction in or along streams pursuant to KRS 151.250, the Natural Resources and Environmental Protection Cabinet frequently encounters actions or proposed actions which are of such nature or location as to have little potential for damage or such that any damage which would occur is limited in extent to the immediate vicinity of the action. This regulation exempts construction of this type from the provisions of KRS 151.250.

**Section 1.** A construction permit pursuant to KRS 151.250 shall not be required for construction in or along a stream whose watershed is less than one (1) square mile, except for the construction of dams as defined by KRS 151.100 or other water impounding structures or for any construction that does or may endanger life or cause severe damage to residential or commercial property.

**Section 2.** A construction permit pursuant to KRS 151.250 shall not be required for a subfluvial utility or pipeline crossing provided that the construction of the crossing meets the following criteria:

(1) During the construction of the crossing, no material may be placed in the stream or in the flood plain of the stream to form construction pads, coffer dams, access roads, etc., unless prior approval has been obtained from the cabinet.

(2) The trench shall be backfilled as closely as possible to the original contour. All excess material from construction of the trench shall be disposed of outside of the flood plain unless the applicant has received prior approval from the cabinet to fill within the flood plain.

(3) For subfluvial crossings of erodible channels, there shall be at least thirty (30) inches clear to the top of the pipe or conduit at all points.

(4) For subfluvial crossings of nonerodible channels, there shall be at least six (6) inches of clear cover above the top of the pipe or conduit at all points, and the pipe or conduit shall be encased on all sides by at least six (6) inches of concrete.

(5) The weight of a pipe and its contents during normal operating conditions at all points must exceed that of an equal volume of water, or the applicant must provide the division with sufficient information to show that the pipe and joints have sufficient strength. (7 Ky.R. 365; eff. 11-6-80.)



COMMONWEALTH OF KENTUCKY  
**NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET**  
DEPARTMENT FOR ENVIRONMENTAL PROTECTION  
FRANKFORT OFFICE PARK  
14 REILLY RD  
FRANKFORT KY 40601

**General Certification--Nationwide Permit #12--Utility Line Backfill and Bedding**

This General Certification is issued in conformity with the requirements of Section 401 of the Clean Water Act of 1977, as amended (33USC 1314), as well as Kentucky Statute KRS 224.16-070.

The Commonwealth of Kentucky hereby certifies under Section 401 of the Clean Water Act (CWA) that it has reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 5, established pursuant to Sections 301, 302, 304, 306 and 307 of the CWA, will not be violated for the activity covered under 33 CFR Part 330 Appendix A(B) (12), namely utility line backfill and bedding provided that the following conditions are met:

- 1) Utility line construction projects through jurisdictional wetlands shall not result in conversion of the area to non-wetland status.
- 2) For the purpose of this General Certification, streams are defined as a solid or dashed blue line on the most recent version of USGS 1:24,000 topographic map. For impacts to streams from utility line construction the following conditions must be met:
  - A) Utility line installation in waters of the Commonwealth shall be minimized to the greatest possible extent.
  - B) All excavations within a stream, necessary to complete a utility line construction project, shall be done in such a manner as to prevent degradation of Waters of the Commonwealth. Spoil material from utility line excavations shall not be allowed to enter the flowing portion of the stream.
  - C) Removal of riparian vegetation in the utility line right-of-way shall be limited to that necessary for equipment access.
  - D) Effective erosion and sedimentation control measures must be employed at all times during the project to prevent degradation of waters of the Commonwealth.
  - E) Site regrading and reseedling will be accomplished within 14 days after disturbance.





James L. Haworth, P.E. - Retired  
Fred A. Meyer, P.E., L.A.  
Philip Boleyn, P.E., L.A.  
Bob Blankenship, P.E.

# Haworth, Meyer & Boleyn, Inc.

James H. Smith, P.E., L.S.  
Bradley M. Meyer, P.E., L.S.  
Joseph C. Pyles, P.E.  
Karen Wood



ENGINEERS • ARCHITECTS • PLANNERS

3 HMB Circle  
U.S. 460  
Frankfort, KY 40601

Office: (502) 695-9800  
Fax: (502) 695-9810

September 9, 1999

RECEIVED

SEP 27 1999

PUBLIC SERVICE  
COMMISSION

Ms. Linda Cooper  
Rural Development  
557 Campbellsville Road  
Columbia, Kentucky 42728

Re: Final Engineering Report  
Contract I and Contract II  
Grayson County Water District Project 11  
HMB Project No: 99407.00

Dear Ms. Cooper:

As you know, the above referenced project was bid September 8, 1999. The low bidder for Contract I was Salmon Construction Inc., from Mt. Washington, KY with a bid of \$680,662.00. The low bidder for Contract II was also Salmon Construction with a bid of \$695,175.00.

Attached find a copy of the Bid Tabulation for the project. Following is a summary of the financing and budget for this project:

<u>Project Budget:</u>	<u>Letter of Conditions</u> <u>March 15, 1999</u>	<u>Current</u> <u>(As Bid)</u>
Development	\$1,687,000	\$1,375,837
Land and Rights	\$ 15,000	\$ 15,000
Legal and Administrative	\$ 32,500	\$ 32,500
Engineering	\$ 166,500	\$ 149,482
Interest during Construction	\$ 47,000	\$ 47,000
Contingencies	\$ 102,000	\$ 430,181
Total Project Cost	\$ 2,050,000	\$ 2,050,000

442 Metroplex  
Suite 105  
Nashville, TN 37211  
(615) 834-4335

624 West Main Street  
Louisville, KY 40202  
(502) 587-0875

2500 Fairlane Drive  
Building 1, Suite 170  
Montgomery, AL 36116  
(334) 277-1002

325 Sixth Avenue  
South Charleston, WV 25303  
(304) 744-5200

1410 Charlestown-New Albany Pike  
Suite 201  
Jeffersonville, IN 47130  
(812) 288-8961

*HMB*

---

September 9, 1999  
Ms. Linda Cooper  
Page Two

It appears the project can be completed well within the available funding; therefore, we have begun the planning phase discussing additional water line extensions and evaluating the options available.

We recommend this contract be approved and allowed to go forward. Please contact our office if there are any questions.

Sincerely,

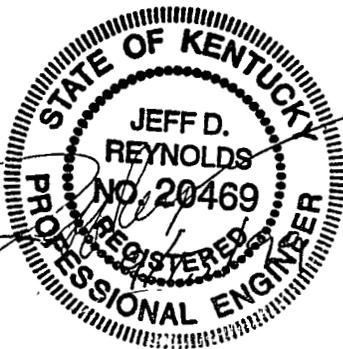
HAWORTH, MEYER & BOLEYN, INC.

*Larry W. Cann*

Larry W. Cann

Enclosures

cc: Kevin Shaw, GCWD  
Willaim Davis, Harper, Ferguson & Davis



LWC/ar



United States Department of Agriculture

Rural Development

771 Corporate Drive, Suite 200 Lexington, KY 40503-6477 (606) 224-7338 TTY(606) 224-7422

September 17, 1999

LC  
mw

SUBJECT: Grayson County Water District Contract I and III- Waterline Expansion Concurrence in Contract Award

TO: Rural Development Manager Grayson, Kentucky

RECEIVED

SEP 27 1999

PUBLIC SERVICE COMMISSION

Based on the bids received and the recommendation of the consulting engineer, Rural Development concurs in the award of the subject contracts to the low bidder, Salmon Construction in the amounts shown below, respectively.

- Contract I - Waterline Expansion- \$680,662.00
- Contract II - Waterline Expansion- \$695,175.00

If you have any questions, please contact Jo Ann Clark, State Engineer, at (606) 224-7348.

*Jo Ann Clark*  
 THOMAS G. FERN  
 State Director  
 Rural Development

cc: ✓ Haworth, Meyer & Boleyn, Inc. Frankfort, Kentucky

Harper, Ferguson & Davis Frankfort, Kentucky

OPTIONAL FORM 99 (7-80)

FAX TRANSMITTAL

# of pages 1

To <i>Larry</i>	From <i>Vernon</i>
Dept./Agency	Phone #
Fax # <i>(502) 695-9810</i>	Fax #

Rural Development is an Equal Opportunity Lender. Complaints of discrimination should be sent to: Secretary of Agriculture, Washington, D.C. 20250

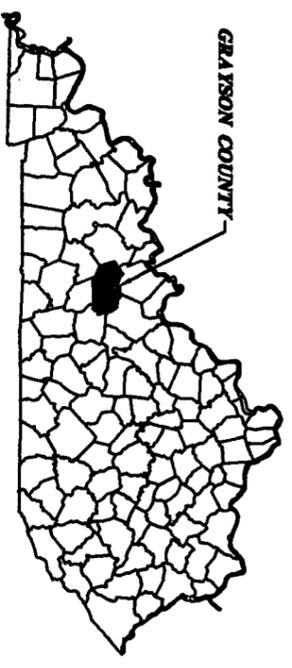
# WATER SYSTEM ADDITIONS GRAYSON COUNTY WATER DISTRICT GRAYSON COUNTY, KENTUCKY

## CONTRACT I

### PROJECT 11

RECEIVED  
SEP 27 1999  
PUBLIC SERVICE  
COMMISSION

SHEET	DESCRIPTION
0	PROJECT MAP
BG01	LINE A19 STA. 0+00 TO STA. 54+00
BG02	LINE A19 STA. 54+00 TO STA. 104+00
BG03	LINE A19 STA. 104+00 TO STA. 155+00
BG04	LINE A19-1 STA. 0+00 TO STA. 55+30
BG05	LINE A19-1 STA. 55+30 TO STA. 108+70
BG06	LINE A19-1 STA. 108+70 TO STA. 123+30
BG07	LINE A25 STA. 0+00 TO STA. 56+00
BG08	LINE A25 STA. 56+00 TO STA. 112+00
BG09	LINE A25 STA. 112+00 TO STA. 137+50
BG10	LINE A25-1 STA. 0+00 TO STA. 44+00
BG11	LINE A25-1 STA. 44+00 TO STA. 90+00
BG12	LINE A25-1 STA. 90+00 TO STA. 140+00
BG13	LINE A25-1 STA. 140+00 TO STA. 192+00
BG14	LINE A25-1 STA. 192+00 TO STA. 227+00
BG15	LINE A25-2 STA. 0+00 TO STA. 39+00
BG16	LINE A25-3 STA. 0+00 TO STA. 55+00
BG17	LINE A25-3 STA. 55+00 TO STA. 68+00
BG18	LINE A25-4 STA. 0+00 TO STA. 41+00
BG19	LINE A25-4 STA. 41+00 TO STA. 85+00



SHEET	DESCRIPTION
BG20	LINE A25-4 STA. 85+00 TO STA. 141+00
BG21	LINE A25-5 STA. 0+00 TO STA. 23+40
BG22	LINE A25-6 STA. 0+00 TO STA. 42+00
BG23	LINE A25-6 STA. 42+00 TO STA. 66+70
BG24	LINE A25-7A STA. 0+00 TO STA. 8+00
BG25	LINE A25-7A STA. 0+00 TO STA. 34+00
BG26	LINE A23 STA. 0+00 TO STA. 41+00
BG27	LINE A12 STA. 0+00 TO STA. 46+70
BG28	LINE A12 STA. 46+70 TO STA. 57+00
BG29	LINE A14 STA. 0+00 TO STA. 56+00
BG30	LINE A14 STA. 56+00 TO STA. 84+50
BG31	LONE HILL PUMP STATION
BG32	LONE HILL PUMP STATION
WD	STANDARD DETAIL SHEET
WD	STANDARD DETAIL SHEET

MAY 1999

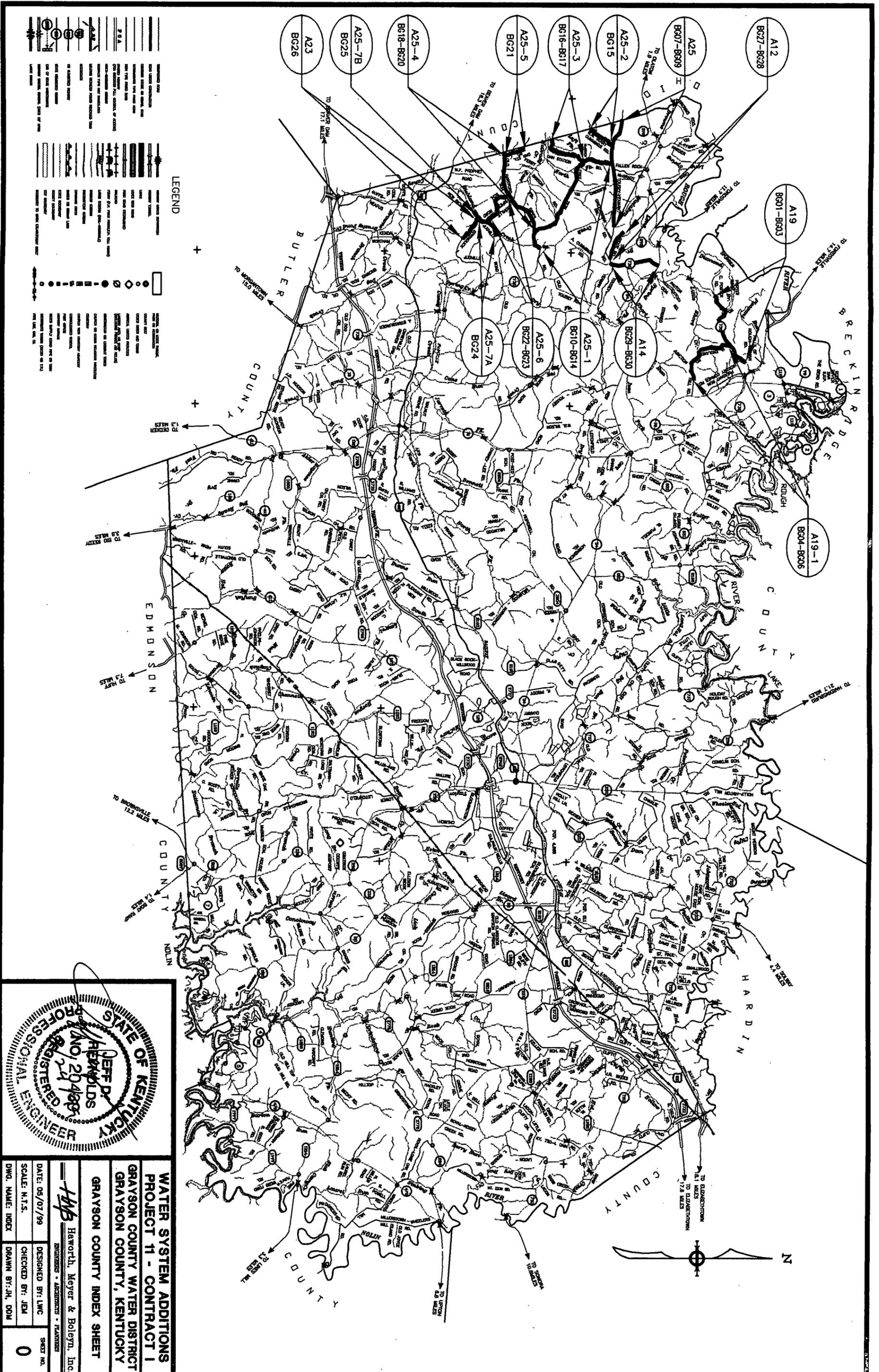
  
**JEFF D. REYNOLDS, P.E.**  
 KENTUCKY P.E. #20,469



  
**Haworth, Meyer & Boleyn, Inc.**  
 ENGINEERS • ARCHITECTS • PLANNERS

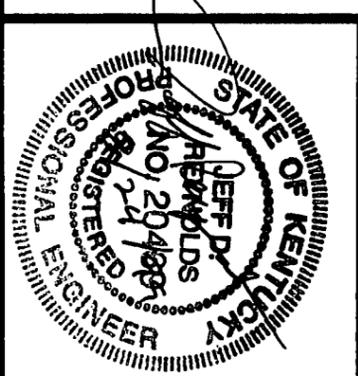
3 HMB Circle  
 Frankfort, Kentucky  
 (502) 695-9800  
 Fax (502) 695-9810

Plans Prepared By:



**LEGEND**

- ROADS
- RAILROADS
- WATER
- WATER SYSTEM ADDITIONS
- PROJECT MARKERS
- PROPERTY LINES
- CONTOUR LINES
- BOUNDARIES
- ADDITIONAL SYMBOLS



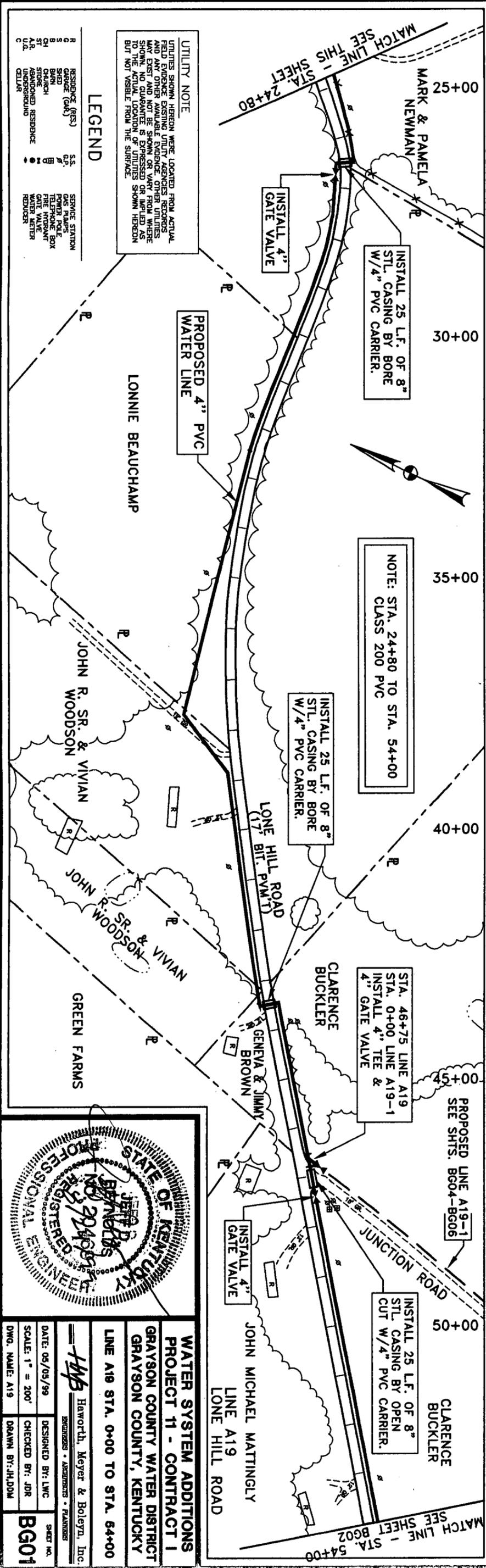
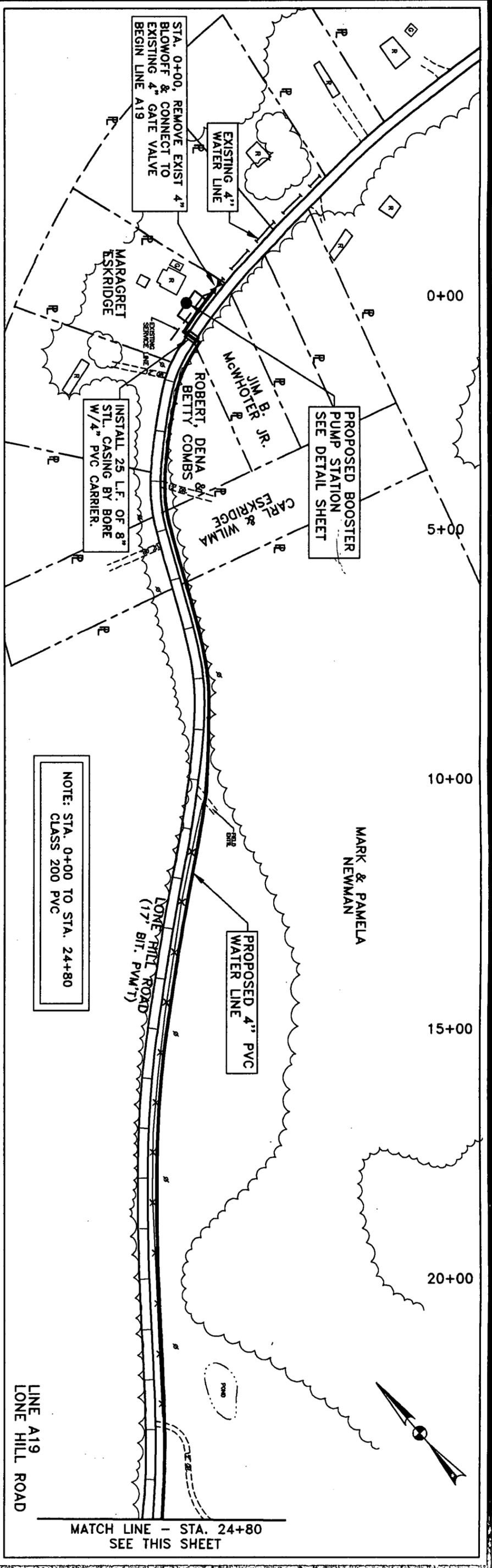
**WATER SYSTEM ADDITIONS  
PROJECT 11 - CONTRACT 1  
GRAYSON COUNTY WATER DISTRICT  
GRAYSON COUNTY, KENTUCKY  
GRAYSON COUNTY INDEX SHEET**

**HMB** Haworth, Meyer & Boleyn, Inc.  
ENGINEERS • ARCHITECTS • PLANNERS

DATE: 05/07/99  
SCALE: N.T.S.  
DWG. NAME: INDEX

DESIGNED BY: LWC  
CHECKED BY: JEM  
DRAWN BY: JH, DDM

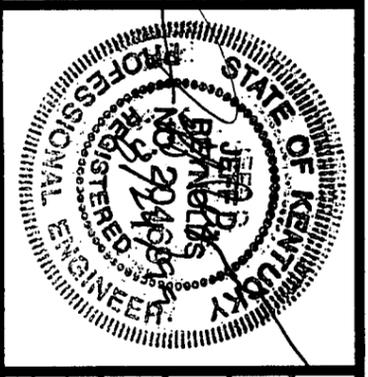
SHEET NO. **0**



**UTILITY NOTE**  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL FIELD EVIDENCE EXISTING UTILITIES RECORDS AND RECORDS OF LOCAL AGENCIES. RECORDS MAY NOT BE COMPLETE AND NOT BE SHOWN OR VARY FROM WHERE SHOWN. NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACTUAL LOCATION OF UTILITIES SHOWN HEREON BUT NOT VISIBLE FROM THE SURFACE.

**LEGEND**

R	RESIDENCE (RES.)	S.S.	SERVICE STATION
B	BAR	G.P.	GAS PIPING
CH	CHURCH	T	TELEPHONE BOX
ST	STONE	F	FIRE HYDRANT
A.R.	ABANDONED RESIDENCE	G.V.	GATE VALVE
C	CELLAR	R	RECORDS



**WATER SYSTEM ADDITIONS  
 PROJECT 11 - CONTRACT 1  
 GRAYSON COUNTY WATER DISTRICT  
 GRAYSON COUNTY, KENTUCKY**

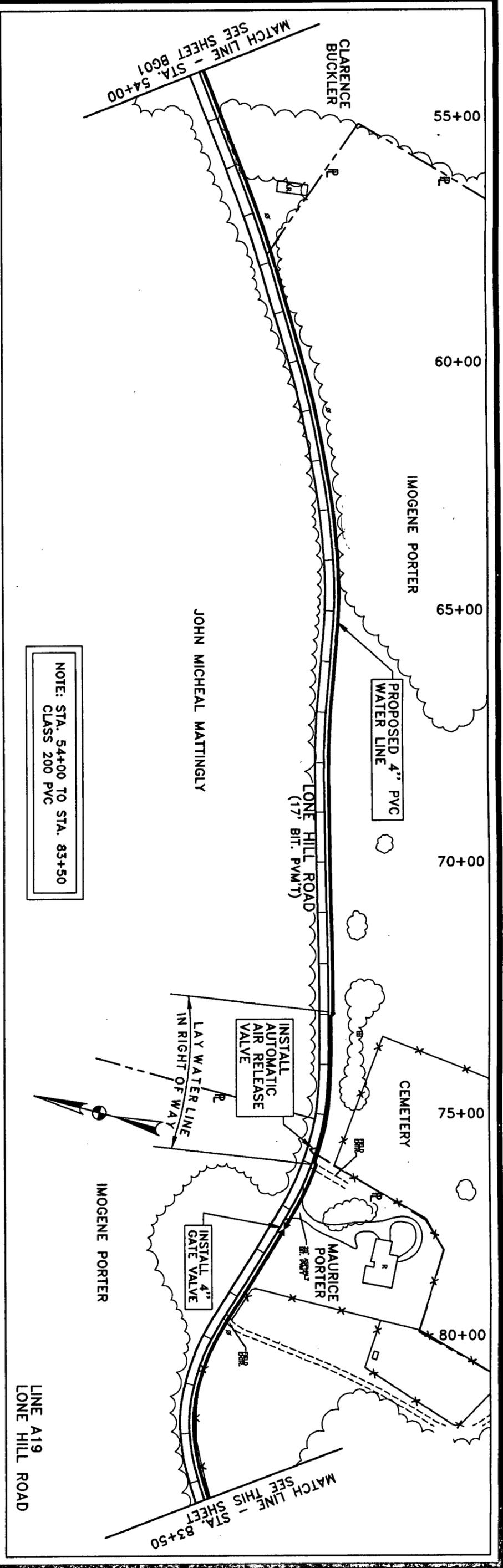
LINE A19 STA. 0+00 TO STA. 64+00

**Haworth, Meyer & Boley, Inc.**  
 ENGINEERS • ARCHITECTS • PLANNERS

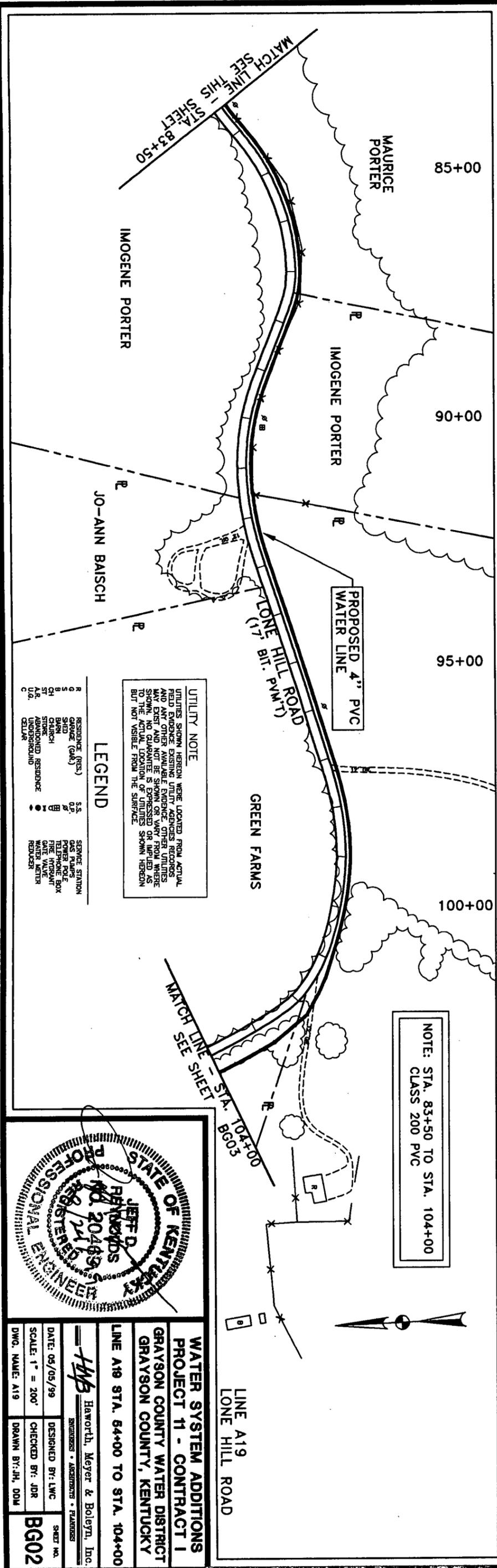
DATE: 05/05/99  
 SCALE: 1" = 200'  
 DWG. NAME: A19

DESIGNED BY: LWC  
 CHECKED BY: JDR  
 DRAWN BY: JHJDM

SHEET NO. **BG01**



NOTE: STA. 54+00 TO STA. 83+50  
CLASS 200 PVC

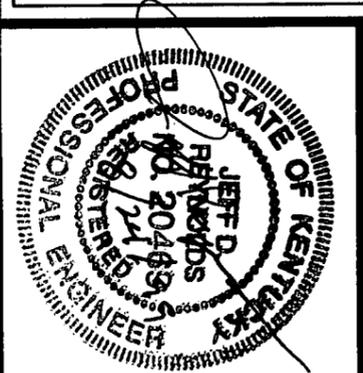


NOTE: STA. 83+50 TO STA. 104+00  
CLASS 200 PVC

**UTILITY NOTE**  
UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL FIELD EVIDENCE, EXISTING UTILITY AGENCIES RECORDS AND ANY OTHER AVAILABLE EVIDENCE. OTHER UTILITIES AND EXISTING AND PROPOSED STRUCTURES ARE SHOWN TO THE ACTUAL LOCATION OF UTILITIES SHOWN HEREON BUT NOT VISIBLE FROM THE SURFACE.

**LEGEND**

R	RESIDENCE (RES.)	S.S.	SERVICE STATION
G	GARAGE (GAR.)	O.P.	OIL PUMP
S	SHED	P.F.	POWER POLE
BH	BURIED HOUSE	T.F.	TELEPHONE BOX
ST	STONE	G.V.	GATE VALVE
A.R.	ABANDONED RESIDENCE	W.M.	WATER METER
U.G.	UNDERGROUND CELLAR	R.	REDUCER



**WATER SYSTEM ADDITIONS  
PROJECT 11 - CONTRACT I  
GRAYSON COUNTY WATER DISTRICT  
GRAYSON COUNTY, KENTUCKY**

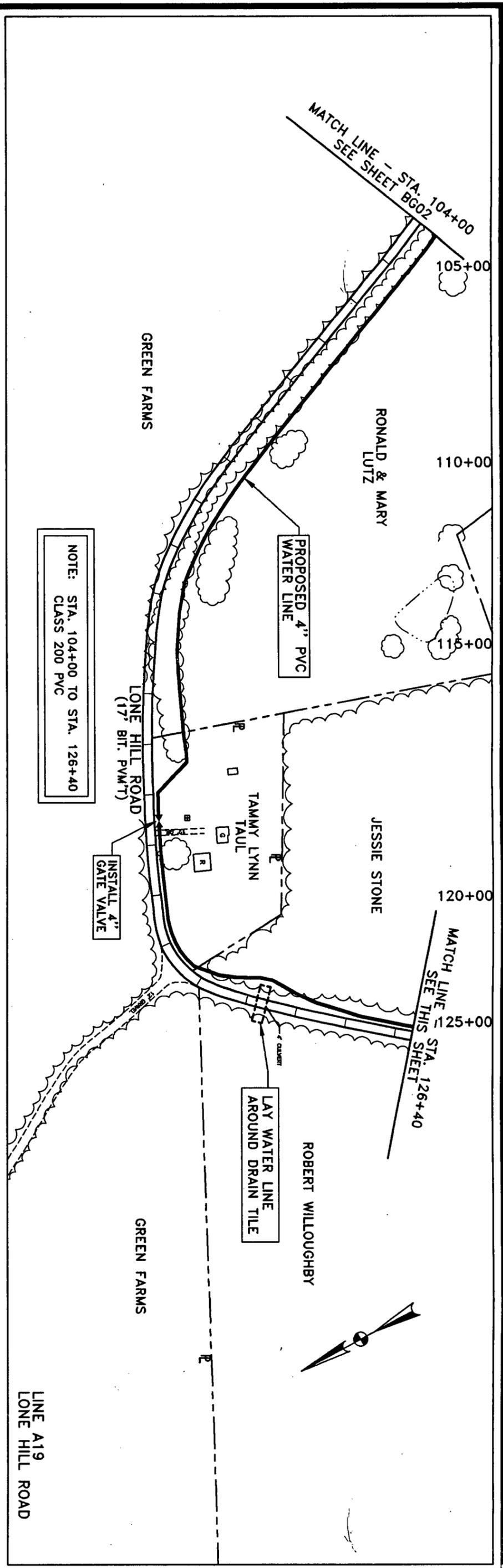
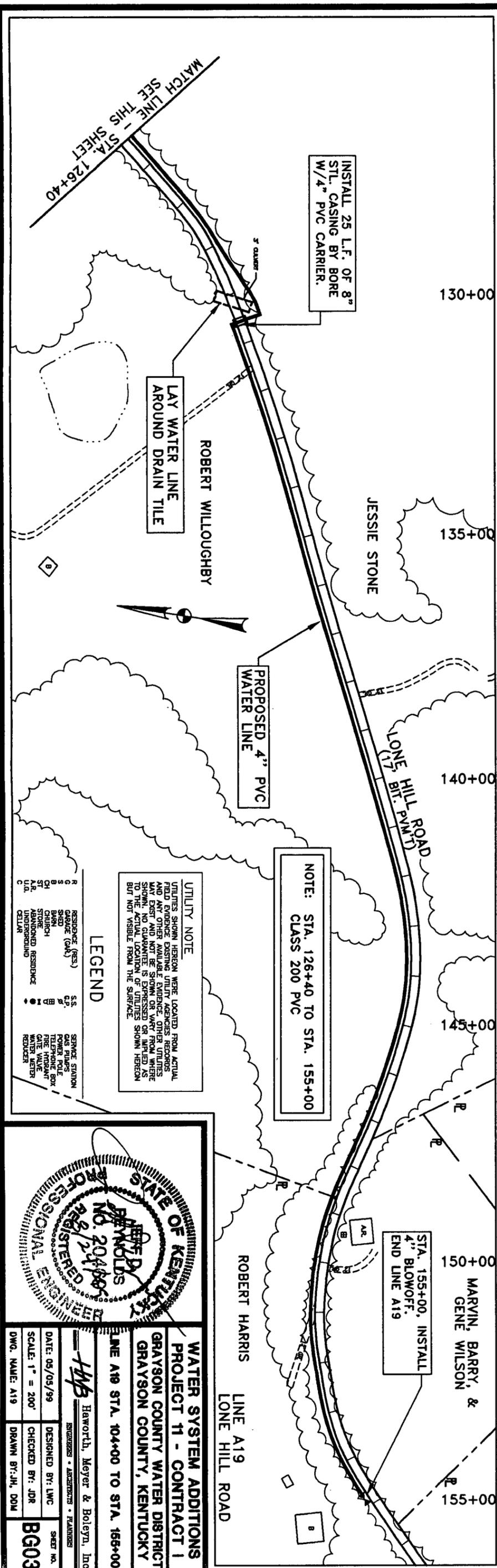
LINE A19 STA. 84+00 TO STA. 104+00

DATE: 05/05/99  
SCALE: 1" = 200'  
DWG. NAME: A19

DESIGNED BY: LWC  
CHECKED BY: JDR  
DRAWN BY: JH, DDM

SHEET NO. **BG02**

Engineers • Architects • Planners  
Haworth, Meyer & Boleyn, Inc.



**UTILITY NOTE**  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL FIELD SURVEY. OWNERS OF UTILITIES ARE RESPONSIBLE FOR ANY OTHER AVAILABLE EVIDENCE. OTHER UTILITIES MAY EXIST AND NOT BE SHOWN OR VARY FROM WHERE SHOWN. NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACTUAL LOCATION OF UTILITIES SHOWN HEREON BUT NOT VISIBLE FROM THE SURFACE.

**LEGEND**

- R RESIDENCE (RES.)
- S SERVICE STATION
- CH CHURCH
- ST STAKE
- UD UNDERGROUND
- C CELLAR
- G.P. GAS PIPES
- B.B. BURNING BOX
- B BATTERY
- W WATER
- M METER
- R ROADS



**WATER SYSTEM ADDITIONS**  
**PROJECT 11 - CONTRACT 1**  
 GRAYSON COUNTY WATER DISTRICT  
 GRAYSON COUNTY, KENTUCKY

LINE A19 STA. 104+00 TO STA. 158+00

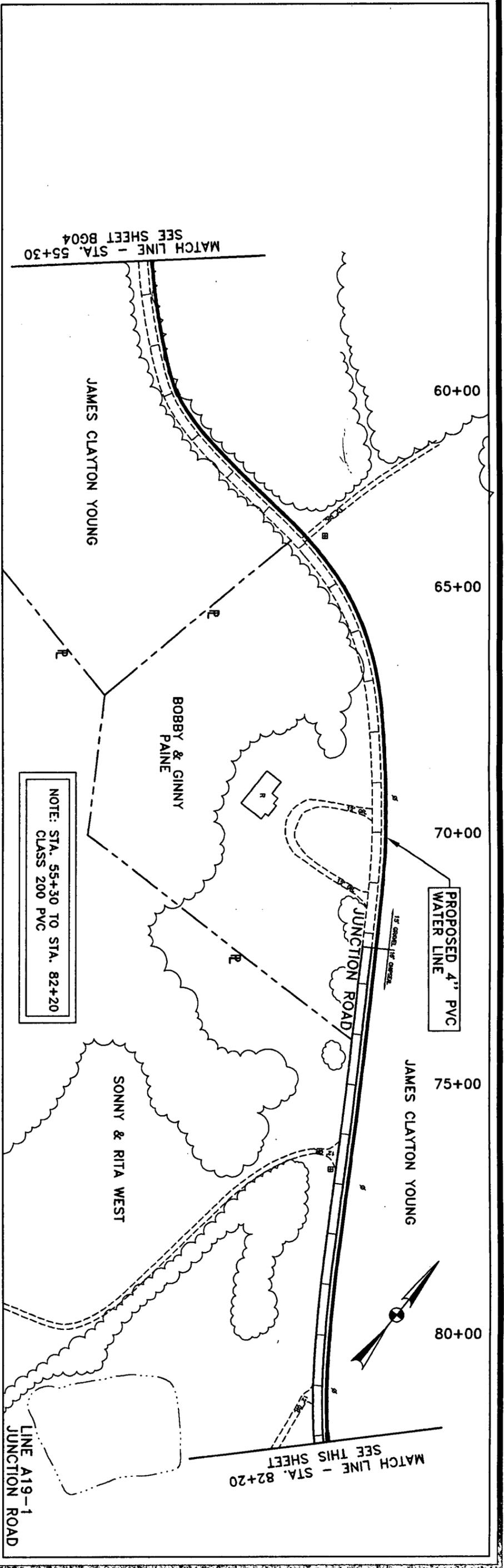
DATE: 05/05/99  
 SCALE: 1" = 200'  
 DWG. NAME: A19

DESIGNED BY: LWC  
 CHECKED BY: JDR  
 DRAWN BY: JH, DDM

SHEET NO. **BG03**

HMB Heworth, Meyer & Boleyn, Inc.  
 ENGINEERS • ARCHITECTS • PLANNERS





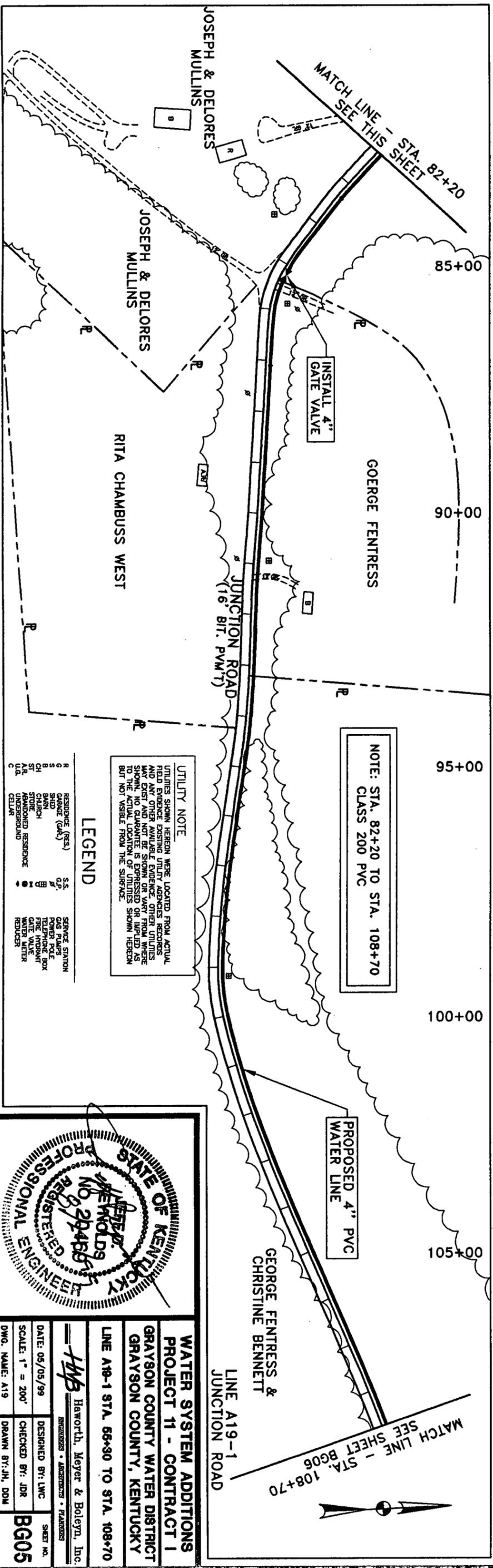
MATCH LINE - STA. 55+30  
SEE SHEET BG04

PROPOSED 4" PVC  
WATER LINE

NOTE: STA. 55+30 TO STA. 82+20  
CLASS 200 PVC

MATCH LINE - STA. 82+20  
SEE THIS SHEET

LINE A19-1  
JUNCTION ROAD



INSTALL 4" GATE VALVE

NOTE: STA. 82+20 TO STA. 108+70  
CLASS 200 PVC

PROPOSED 4" PVC  
WATER LINE

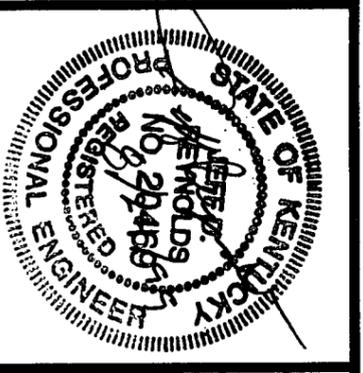
MATCH LINE - STA. 108+70  
SEE SHEET BG05

LINE A19-1  
JUNCTION ROAD

UTILITY NOTE  
UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL FIELD EVIDENCE EXISTING UTILITY AGENCIES RECORDS AND EXISTING UTILITIES SHOWN ON THE PLANS. THE LOCATION OF UTILITIES SHOWN, NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACTUAL LOCATION OF UTILITIES SHOWN HEREON BUT NOT VISIBLE FROM THE SURFACE.

LEGEND

- |    |                     |      |                 |
|----|---------------------|------|-----------------|
| R  | RESIDENCE (RES.)    | S.S. | SERVICE STATION |
| G  | GAZ PUMP            | G.P. | POWER POLE      |
| S  | SEWER               | P    | PIPE            |
| CH | CHURCH              | BM   | BENCH MARK      |
| ST | STONE               | GV   | GATE VALVE      |
| AR | ABANDONED RESIDENCE | WM   | WATER METER     |
| UA | UTILITY             |      |                 |



**WATER SYSTEM ADDITIONS**  
**PROJECT 11 - CONTRACT 1**  
 GRAYSON COUNTY WATER DISTRICT  
 GRAYSON COUNTY, KENTUCKY

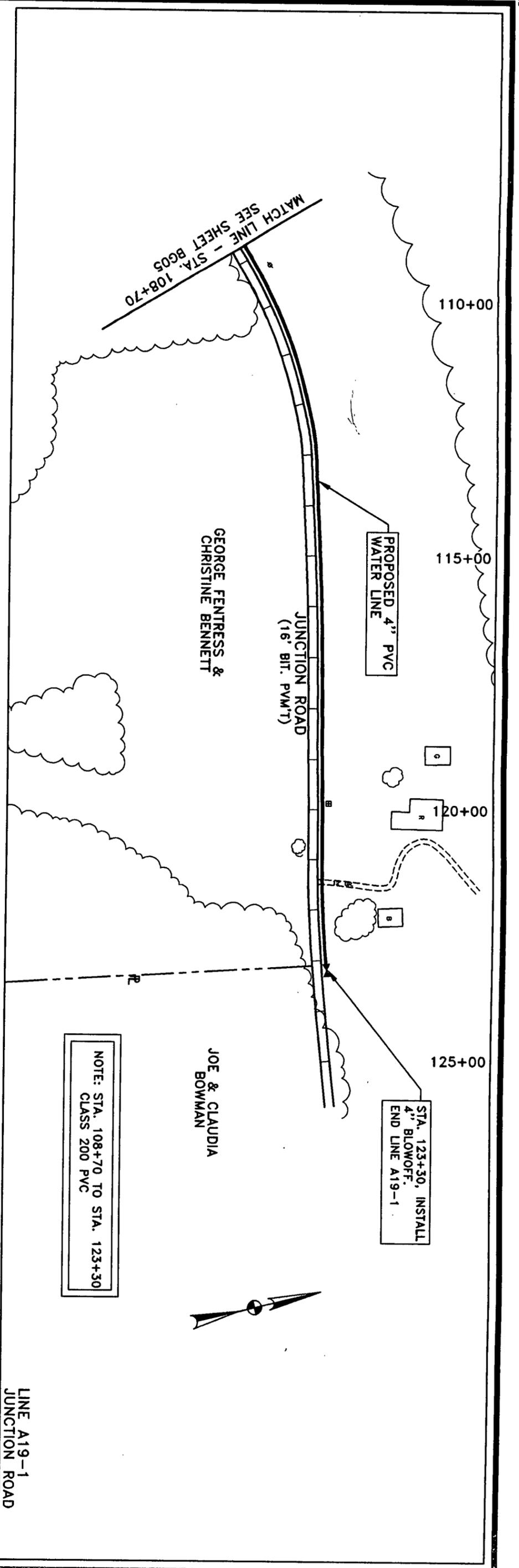
LINE A19-1 STA. 82+20 TO STA. 108+70

**HMB** Heworth, Meyer & Boley, Inc.  
 ENGINEERS • ARCHITECTS • PLANNERS

DATE: 05/05/99  
 SCALE: 1" = 200'  
 DWG. NAME: A19

DESIGNED BY: LWC  
 CHECKED BY: JDR  
 DRAWN BY: JH, DDM

SHEET NO.  
**BG05**



**UTILITY NOTE**  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL FIELD EVIDENCE EXCEPT WHERE SHOWN OTHERWISE. UTILITIES MAY EXIST AND NOT BE SHOWN OR VARY FROM WHERE SHOWN. NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACTUAL LOCATION OF UTILITIES SHOWN HEREON BUT NOT VISIBLE FROM THE SURFACE.

**LEGEND**

R	RESIDENCE (RECS)	S.S.	SERVICE STATION
G	GRADE (GAL)	C.P.	CONCRETE PILE
B	BARN	R	ROCK
CH	CHURCH	W	WATER METER
ST	STONE	●	WATER VALVE
UG	UNDERGROUND	○	WATER REDUCER
C	CELLAR		



**WATER SYSTEM ADDITIONS  
 PROJECT 11 - CONTRACT 1  
 GRAYSON COUNTY WATER DISTRICT  
 GRAYSON COUNTY, KENTUCKY**

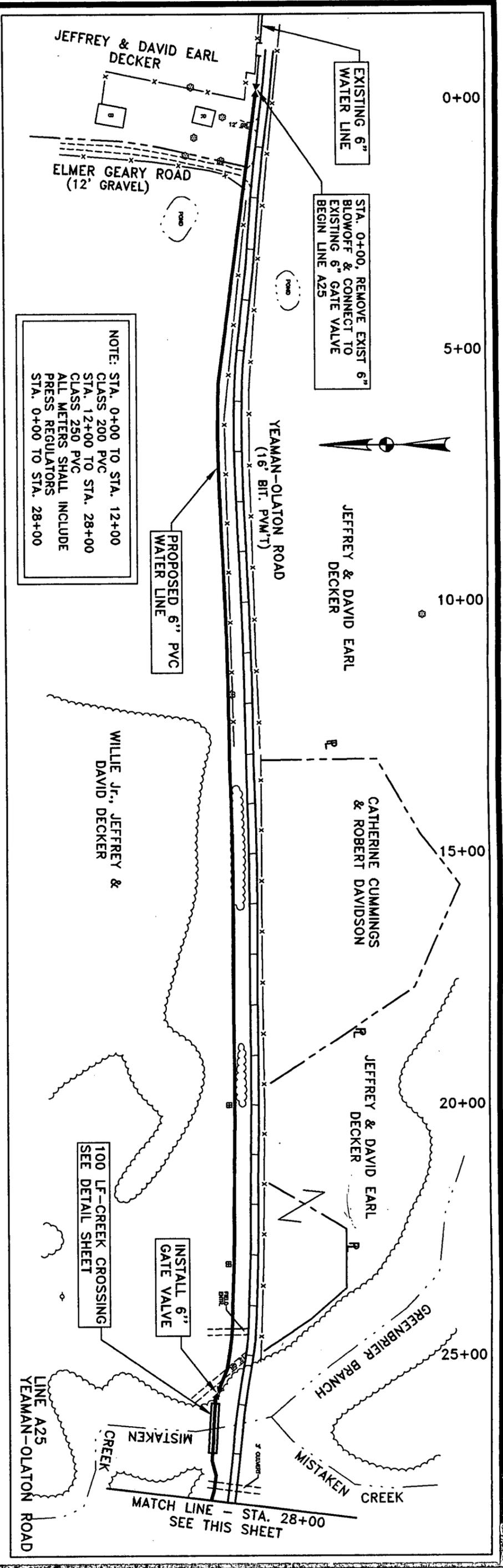
LINE A19-1 STA. 108+70 TO STA. 123+30

*HMB* Haworth, Meyer & Boleyn, Inc.  
 ENGINEERS • ARCHITECTS • PLANNERS

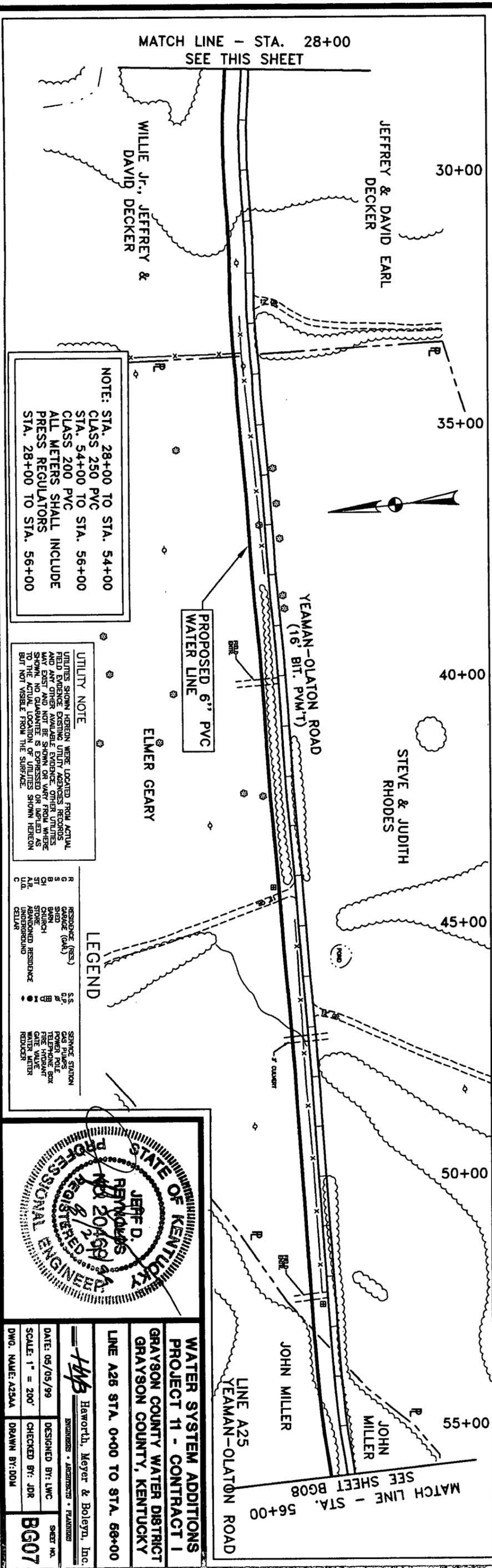
DATE: 05/05/99 DESIGNED BY: LMC  
 SCALE: 1" = 200' CHECKED BY: JDR  
 DWG. NAME: A19 DRAWN BY: JH, DDM

SHEET NO. **BG06**

LINE A19-1  
 JUNCTION ROAD



NOTE: STA. 0+00 TO STA. 12+00  
 CLASS 200 PVC  
 STA. 12+00 TO STA. 28+00  
 CLASS 250 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 0+00 TO STA. 28+00



NOTE: STA. 28+00 TO STA. 54+00  
 CLASS 250 PVC  
 STA. 54+00 TO STA. 56+00  
 CLASS 200 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 28+00 TO STA. 56+00

UTILITY NOTE  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL  
 FIELD EVIDENCE EXISTING UTILITY AGENCIES RECORDS  
 AND ANY OTHER AVAILABLE EVIDENCE. OTHER UTILITIES  
 MAY EXIST AND NOT BE SHOWN HEREON OR INDICATED AS  
 TO THE ACTUAL LOCATION OF UTILITIES SHOWN HEREON  
 BUT NOT VISIBLE FROM THE SURFACE.

LEGEND

R	RESIDENCE (RES.)	S.S.	SEWER STATION
S	SHED	9"	POWER POLE
BH	BAVEN	6"	TELEPHONE BOX
CH	CHURCH	8"	FIRE HYDRANT
AR	ABANDONED RESIDENCE	●	WATER LETTER
U.R.	UNDERGROUND	○	REDUCER
C	CELLAR		



**WATER SYSTEM ADDITIONS**  
**PROJECT 11 - CONTRACT 1**  
 GRAYSON COUNTY WATER DISTRICT  
 GRAYSON COUNTY, KENTUCKY

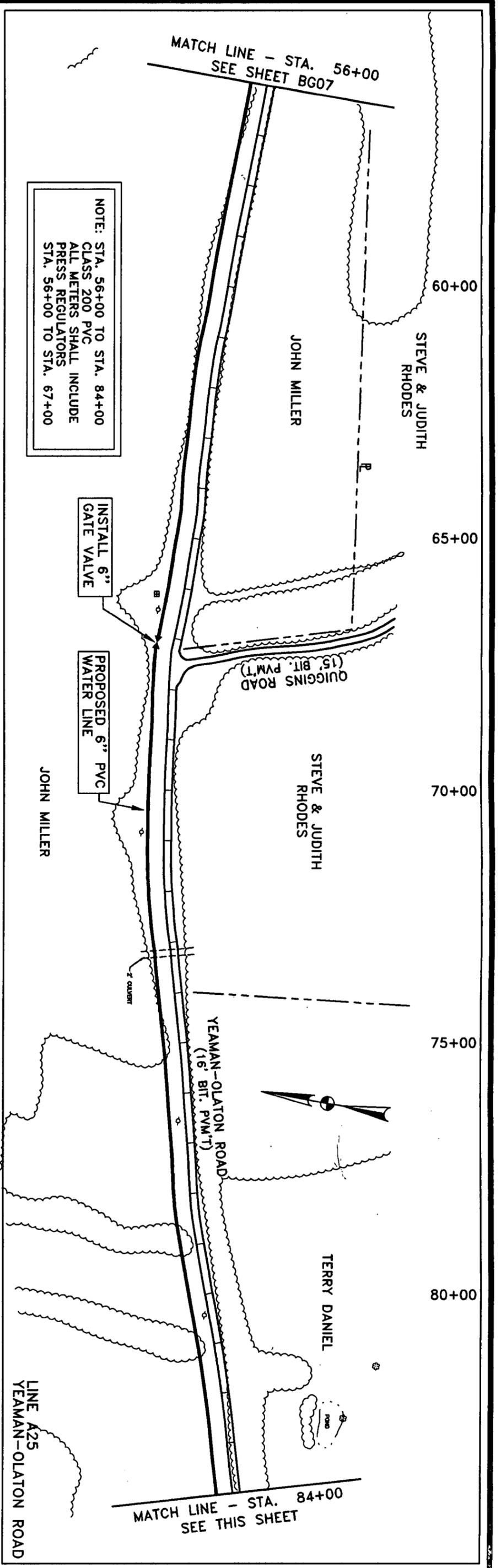
LINE A25 STA. 0+00 TO STA. 56+00

DATE: 08/05/99  
 SCALE: 1" = 20'  
 DWG. NAME: A25AA

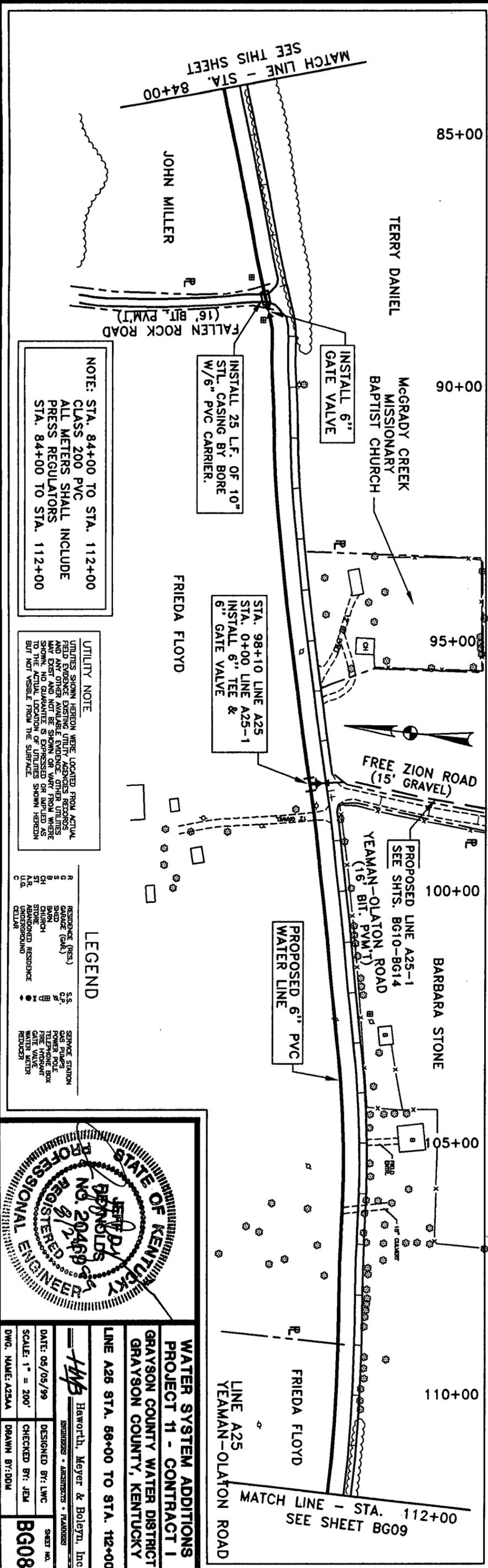
DESIGNED BY: LWC  
 CHECKED BY: JDR  
 DRAWN BY: DDM

SHEET NO.  
**BG07**

Haworth, Meyer & Boleyn, Inc.



NOTE: STA. 56+00 TO STA. 84+00  
 CLASS 200 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 56+00 TO STA. 67+00

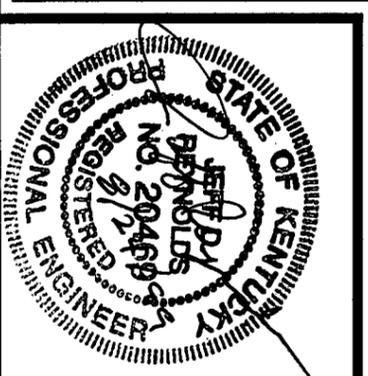


NOTE: STA. 84+00 TO STA. 112+00  
 CLASS 200 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 84+00 TO STA. 112+00

UTILITY NOTE  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL  
 FIELD EVIDENCE EXISTING UTILITY AGENCIES RECORDS  
 AND ANY OTHER AVAILABLE UTILITY EVIDENCE. OTHER UTILITIES  
 NOT SHOWN ON THIS PLAN ARE SHOWN ON THE SURFACE  
 TO THE ACTUAL LOCATION OF UTILITIES SHOWN HEREON  
 BUT NOT VISIBLE FROM THE SURFACE.

**LEGEND**

R	RESIDENCE (PERS.)	S.S.	SERVICE STATION
G	GAUGE (GAL.)	SP	GAS PIPES
B	BANK	PO	POWER POLE
ST	STREET	TE	TELEPHONE BOX
U.G.	UNDERGROUND	W	WATER METER
CELL	CELLAR	RED	REDUCER



**WATER SYSTEM ADDITIONS**  
**PROJECT 11 - CONTRACT 1**  
 GRAYSON COUNTY WATER DISTRICT  
 GRAYSON COUNTY, KENTUCKY

LINE A26 STA. 56+00 TO STA. 84+00

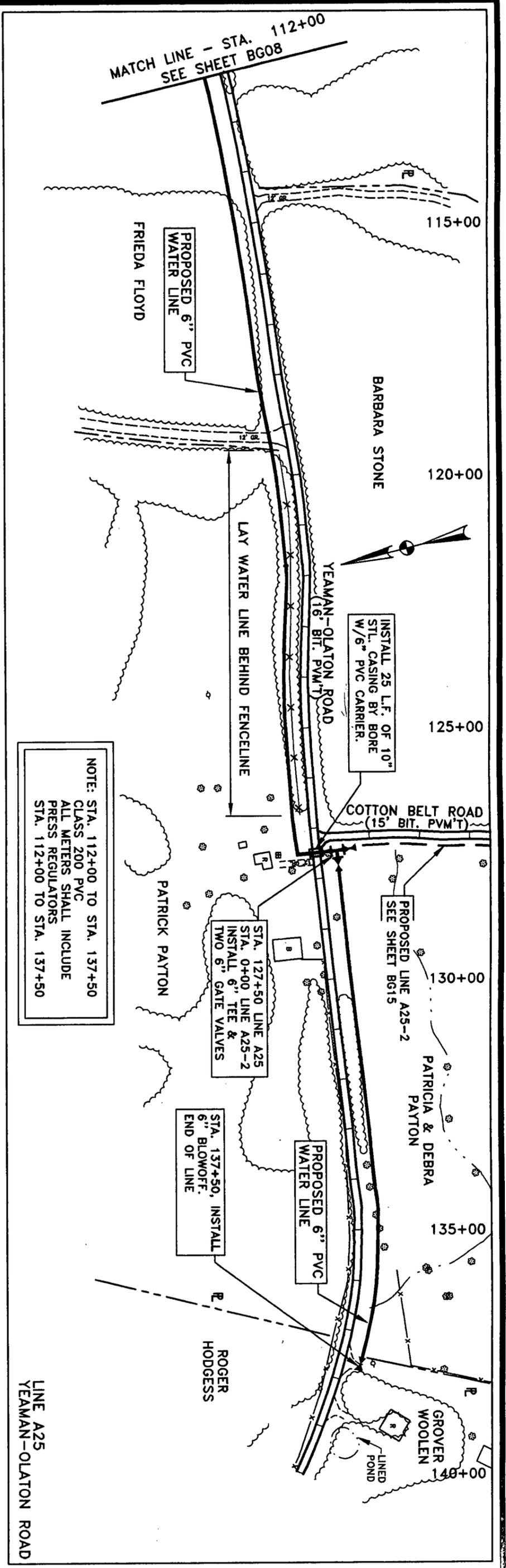
LINE A25  
 YEAMAN-OLATON ROAD

DATE: 05/05/99  
 SCALE: 1" = 200'  
 DWG. NAME: A25A4

DESIGNED BY: LWC  
 CHECKED BY: JEM

SHEET NO. **BG08**

Haworth, Meyer & Boley, Inc.  
 ENGINEERS • ARCHITECTS • PLANNERS

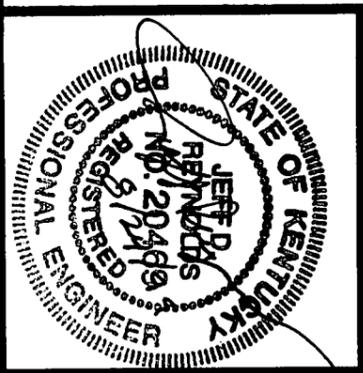


NOTE: STA. 112+00 TO STA. 137+50  
 CLASS 200 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 112+00 TO STA. 137+50

**UTILITY NOTE**  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL FIELD EVIDENCE EXISTING UTILITY AGENCIES RECORDS AND ANY OTHER AVAILABLE EVIDENCE. OTHER UTILITIES MAY EXIST AND NOT BE SHOWN OR VARY FROM WHERE SHOWN. NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACTUAL LOCATION OF UTILITIES SHOWN HEREON BUT NOT VISIBLE FROM THE SURFACE.

**LEGEND**

R	RESIDENCE (RCS)	S.S.	SERVICE STATION
S	SHED (S.A.)	g	POWER POLE
B	BARN	g	TELEPHONE BOX
CH	CHURCH	g	FIRE HYDRANT
ATL	ABANDONED RESIDENCE	g	WATER METER
U	UNDERGROUND	g	REDUCER
C	CELLAR		



**WATER SYSTEM ADDITIONS  
 PROJECT 11 - CONTRACT 1  
 GRAYSON COUNTY WATER DISTRICT  
 GRAYSON COUNTY, KENTUCKY**

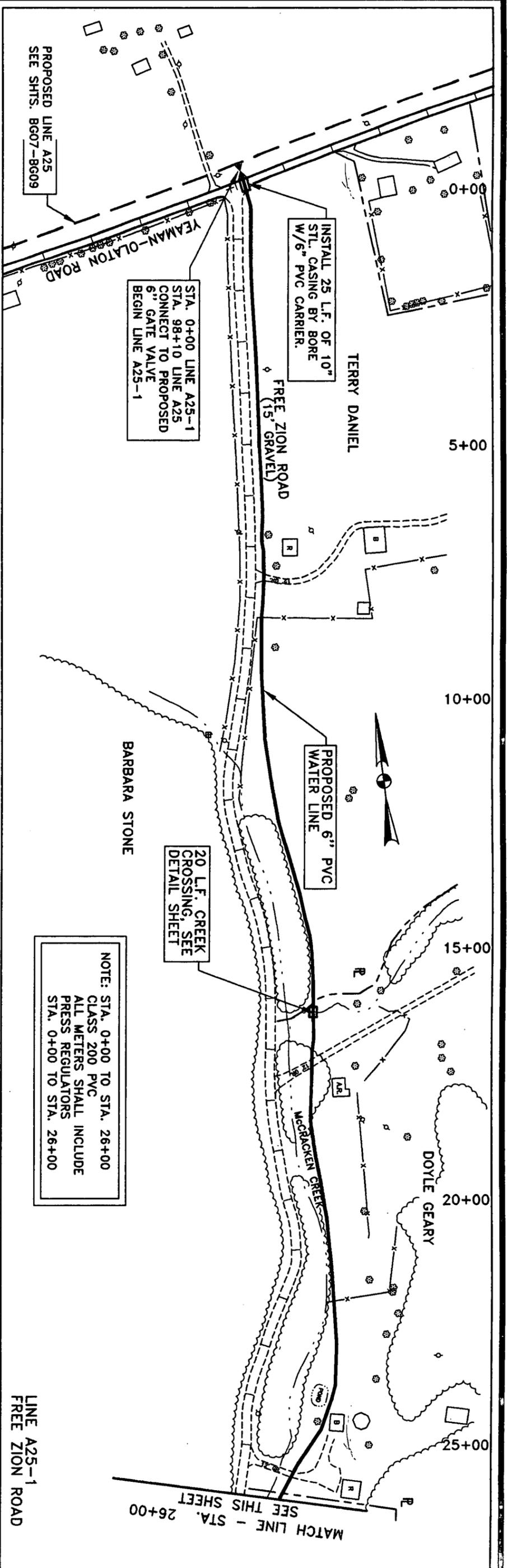
LINE A26 STA. 112+00 TO STA. 137+50

**1415** Haworth, Meyer & Boleyn, Inc.  
 ENGINEERS • ARCHITECTS • PLANNERS

DATE: 05/05/99  
 SCALE: 1" = 200'  
 DWG. NAME: A25AA

DESIGNED BY: LWC  
 CHECKED BY: JEM  
 DRAWN BY: DBM

SHEET NO.  
**BG09**



PROPOSED LINE A25  
SEE SHTS. BG07-BG09

STA. 0+00 LINE A25-1  
STA. 98+10 LINE A25  
CONNECT TO PROPOSED  
6" GATE VALVE  
BEGIN LINE A25-1

INSTALL 25 L.F. OF 10"  
STL. CASING BY BORE  
W/6" PVC CARRIER.

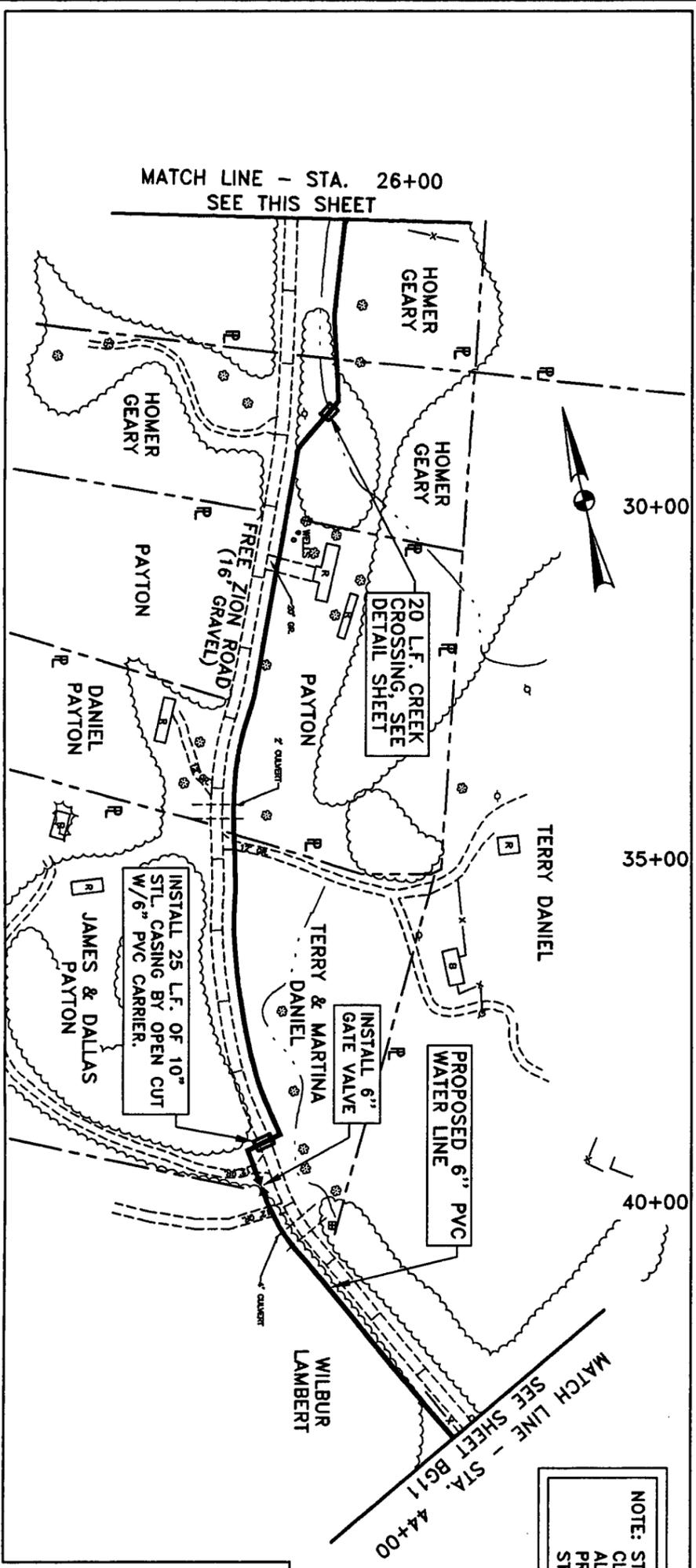
PROPOSED 6" PVC  
WATER LINE

20 L.F. CREEK  
CROSSING, SEE  
DETAIL SHEET

NOTE: STA. 0+00 TO STA. 26+00  
CLASS 200 PVC  
ALL METERS SHALL INCLUDE  
PRESS REGULATORS  
STA. 0+00 TO STA. 26+00

LINE A25-1  
FREE ZION ROAD

MATCH LINE - STA. 26+00  
SEE THIS SHEET



MATCH LINE - STA. 26+00  
SEE THIS SHEET

20 L.F. CREEK  
CROSSING, SEE  
DETAIL SHEET

INSTALL 25 L.F. OF 10"  
STL. CASING BY OPEN CUT  
W/6" PVC CARRIER.

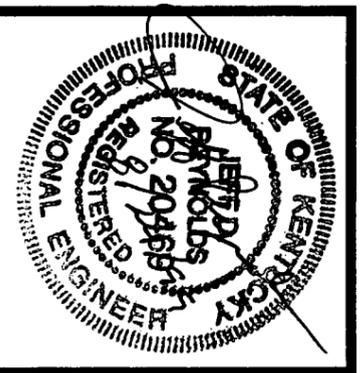
INSTALL 6" GATE VALVE

PROPOSED 6" PVC  
WATER LINE

NOTE: STA. 26+00 TO STA. 44+00  
CLASS 200 PVC  
ALL METERS SHALL INCLUDE  
PRESS REGULATORS  
STA. 26+00 TO STA. 44+00

LINE A25-1  
FREE ZION ROAD

MATCH LINE - STA. 44+00  
SEE SHEET BG11



LEGEND

R	RESIDENCE (RES.)	S.S.	SERVICE STATION
G	GARAGE (GAR.)	C.P.	GAS PIPES
S	SHED	P	POWER POLE
B	BARN	W	WATER METER
ST	STORE	W	WATER METER
A.R.	ABANDONED RESIDENCE	W	WATER METER
U.G.	UNDERGROUND	W	WATER METER
	UTILITY	W	WATER METER

UTILITY NOTE  
UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL FIELD EVIDENCE EXISTING UTILITY AGENCIES RECORDS MAY EXIST AND NOT BE SHOWN OR VARY FROM WHERE SHOWN. NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACTUAL LOCATION OF UTILITIES SHOWN HEREON BUT NOT VISIBLE FROM THE SURFACE.

**WATER SYSTEM ADDITIONS**  
**PROJECT 11 - CONTRACT 1**  
**GRAYSON COUNTY WATER DISTRICT**  
**GRAYSON COUNTY, KENTUCKY**

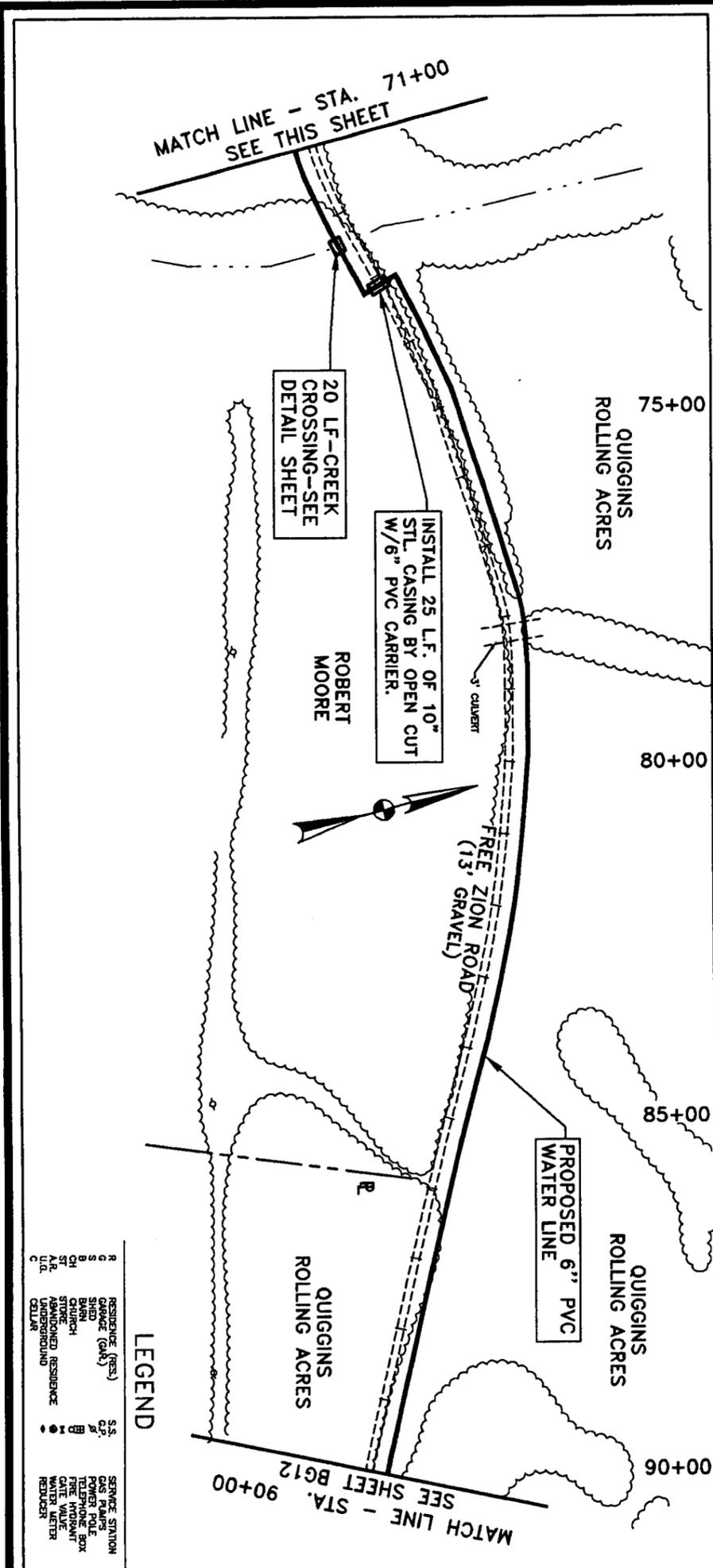
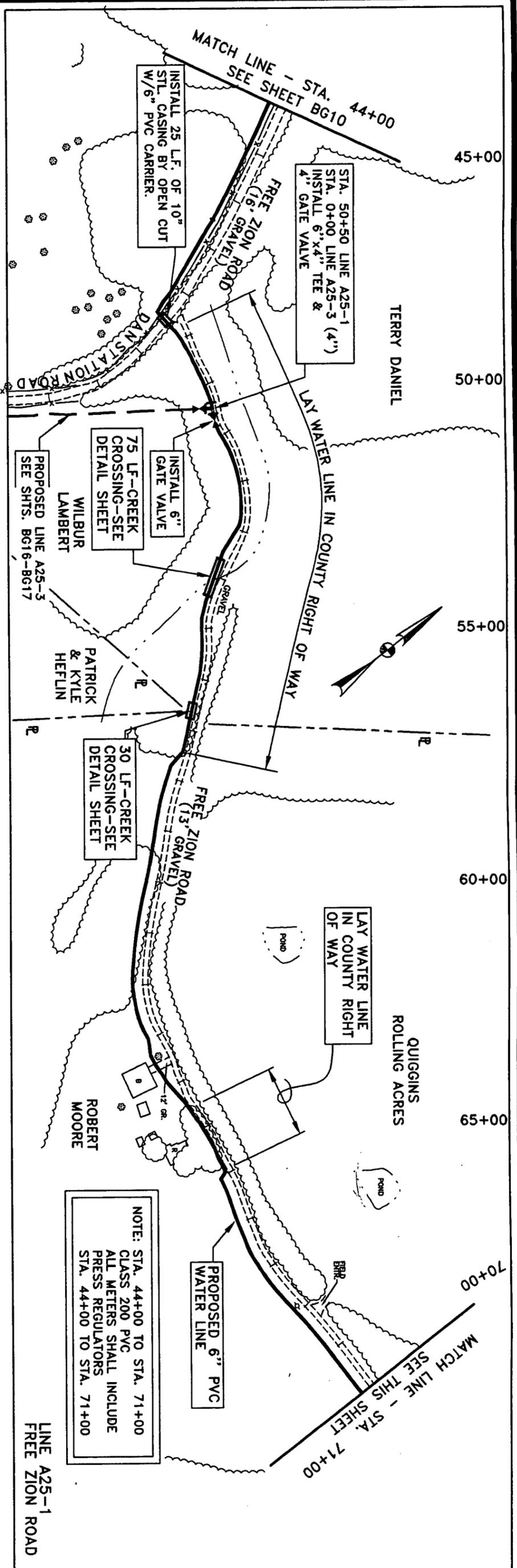
LINE A25-1 STA. 0+00 TO STA. 44+00

DATE: 05/06/99  
SCALE: 1" = 200'  
DWG. NAME: A25B8

DESIGNED BY: LWC  
CHECKED BY: JDR  
DRAWN BY: DDW

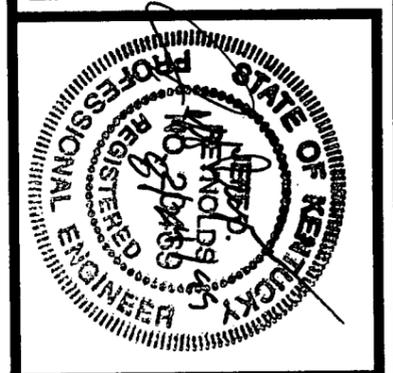
SHEET NO.  
**BG10**

Havorth, Meyer & Boleyn, Inc.  
REGISTERED PROFESSIONAL ENGINEERS - FLUORIDERS



**LEGEND**

R	RESIDENCE (REAR)	S.S.	SERVICE STATION
S	RESIDENCE (FRONT)	C.P.	GAS PIPES
B	SHED	W	WATER METER
M	MANHOLE	P	POWER POLE
ST	STREET	W	WATER METER
A.R.	ABANDONED RESIDENCE	W	WATER METER
U.C.	UNDERGROUND	W	WATER METER
C	CELLAR	W	WATER METER



**UTILITY NOTE**  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL FIELD EVIDENCE EXISTING UTILITY AGENCIES RECORDS AND ANY OTHER AVAILABLE EVIDENCE. OTHER UTILITIES MAY EXIST AND NOT BE SHOWN OR VARY FROM UTILITIES SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES SHOWN HEREON BUT NOT VISIBLE FROM THE SURFACE.

**NOTE:** STA. 71+00 TO STA. 90+00  
 CLASS 200 PVC  
 ALL METERS SHALL INCLUDE PRESS REGULATORS  
 STA. 71+00 TO STA. 80+00

**NOTE:** STA. 44+00 TO STA. 71+00  
 CLASS 200 PVC  
 ALL METERS SHALL INCLUDE PRESS REGULATORS  
 STA. 44+00 TO STA. 71+00

**LINE A25-1  
 FREE ZION ROAD**

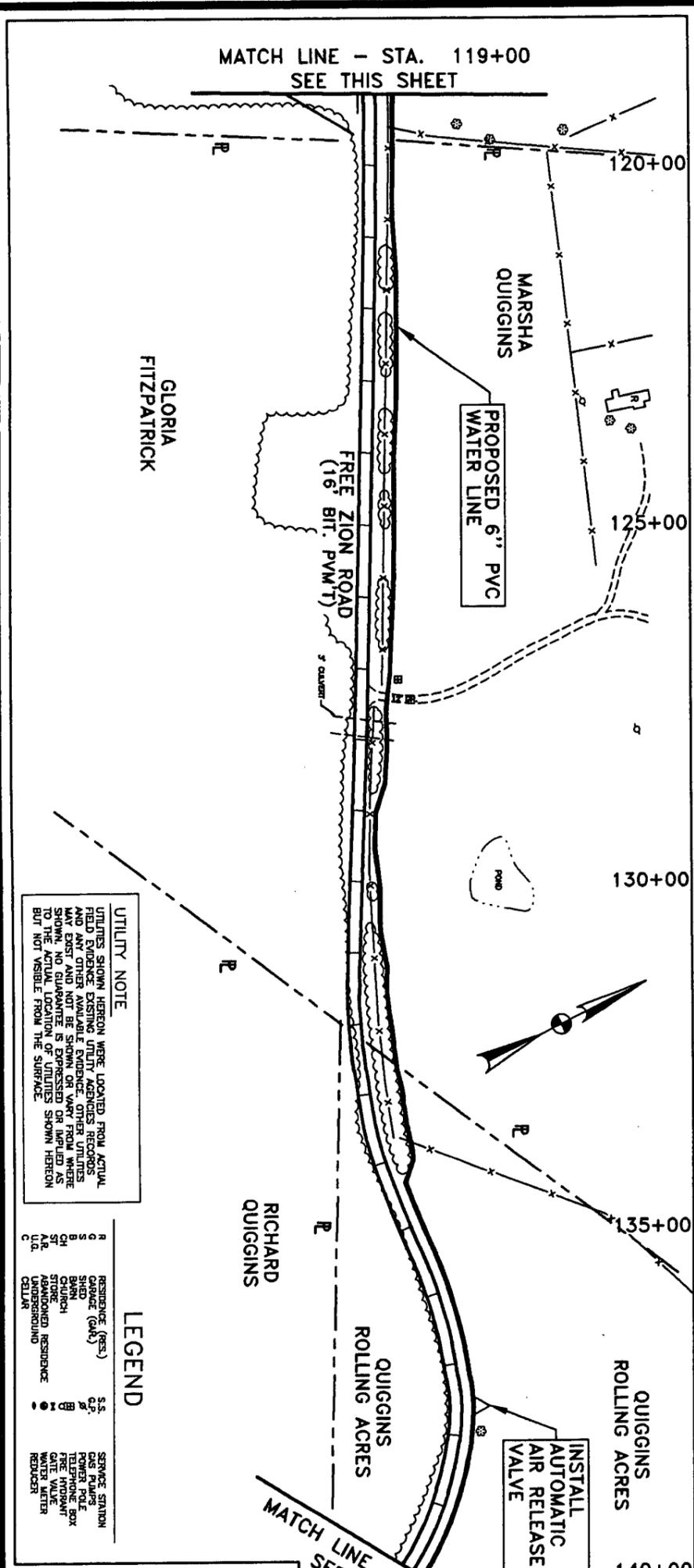
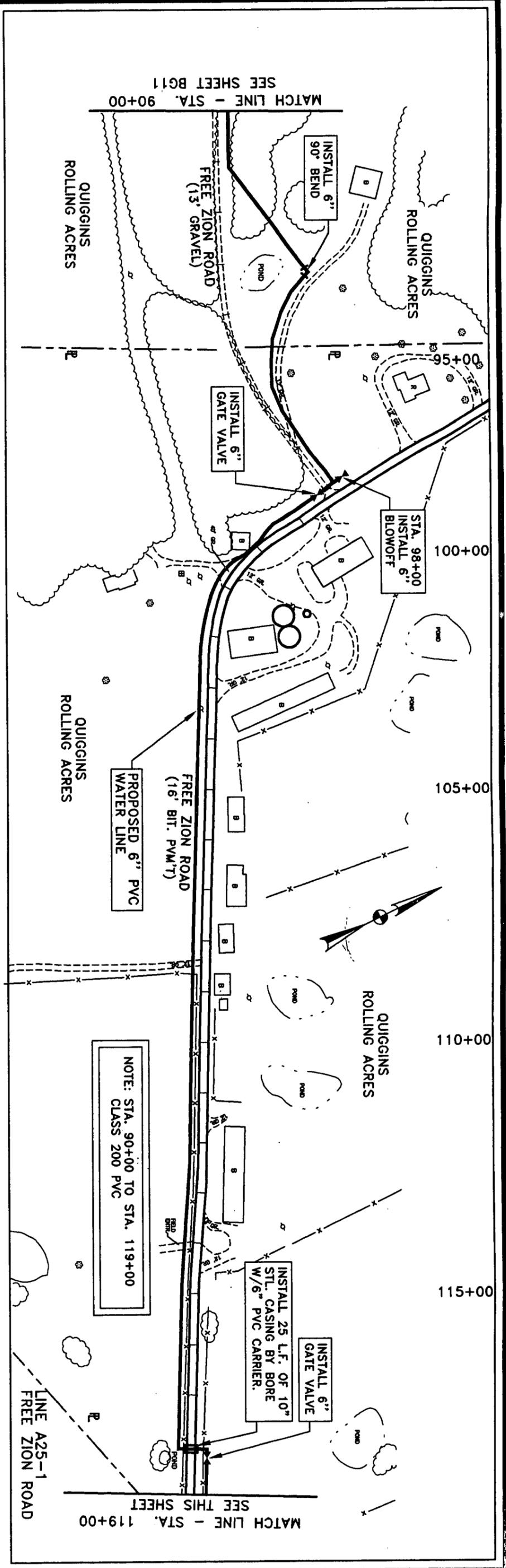
**WATER SYSTEM ADDITIONS  
 PROJECT 11 - CONTRACT 1  
 GRAYSON COUNTY WATER DISTRICT  
 GRAYSON COUNTY, KENTUCKY**

LINE A25-1 STA. 44+00 TO STA. 90+00

**HWB** Haworth, Meyer & Boley, Inc.  
 ENGINEERS - ARCHITECTS - PLANNERS

DATE: 05/05/99  
 DESIGNED BY: LWC  
 SCALE: 1" = 200'  
 CHECKED BY: JDR  
 DWG. NAME: A258B  
 DRAWN BY: DDM

SHEET NO. **BG11**



MATCH LINE - STA. 140+00  
SEE SHEET BG13

MATCH LINE - STA. 90+00  
SEE SHEET BG11

LINE A25-1  
FREE ZION ROAD

NOTE: STA. 119+00 TO STA. 140+00  
CLASS 200 PVC

NOTE: STA. 90+00 TO STA. 119+00  
CLASS 200 PVC

**WATER SYSTEM ADDITIONS**  
**PROJECT 11 - CONTRACT 1**  
GRAYSON COUNTY WATER DISTRICT  
GRAYSON COUNTY, KENTUCKY

LINE A25-1 STA. 90+00 TO STA. 140+00

**LEGEND**

<ul style="list-style-type: none"> <li>R RESIDENCE (RES.)</li> <li>B GARAGE (GAR.)</li> <li>S SHED</li> <li>BN BARN</li> <li>ST STORE</li> <li>SH SHED</li> <li>ADV ADVANCED RESIDENCE</li> <li>U. U.</li> <li>C CELLAR</li> </ul>	<ul style="list-style-type: none"> <li>S.S. SERVICE STATION</li> <li>C.S. GAS PIPING</li> <li>P.P. POWER POLE</li> <li>T.B. TELEPHONE BOX</li> <li>W.C. WATER CISTERN</li> <li>W.M. WATER METER</li> <li>R.D. REDUCER</li> </ul>
--	--

**UTILITY NOTE**

UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL FIELD SURVEY AND/OR FROM AVAILABLE RECORDS. ANY OTHER UTILITIES NOT SHOWN OR VARY FROM THOSE SHOWN, NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACTUAL LOCATION OF UTILITIES SHOWN HEREON BUT NOT VISIBLE FROM THE SURFACE.

**STATE OF KENTUCKY**  
**REGISTERED PROFESSIONAL ENGINEER**

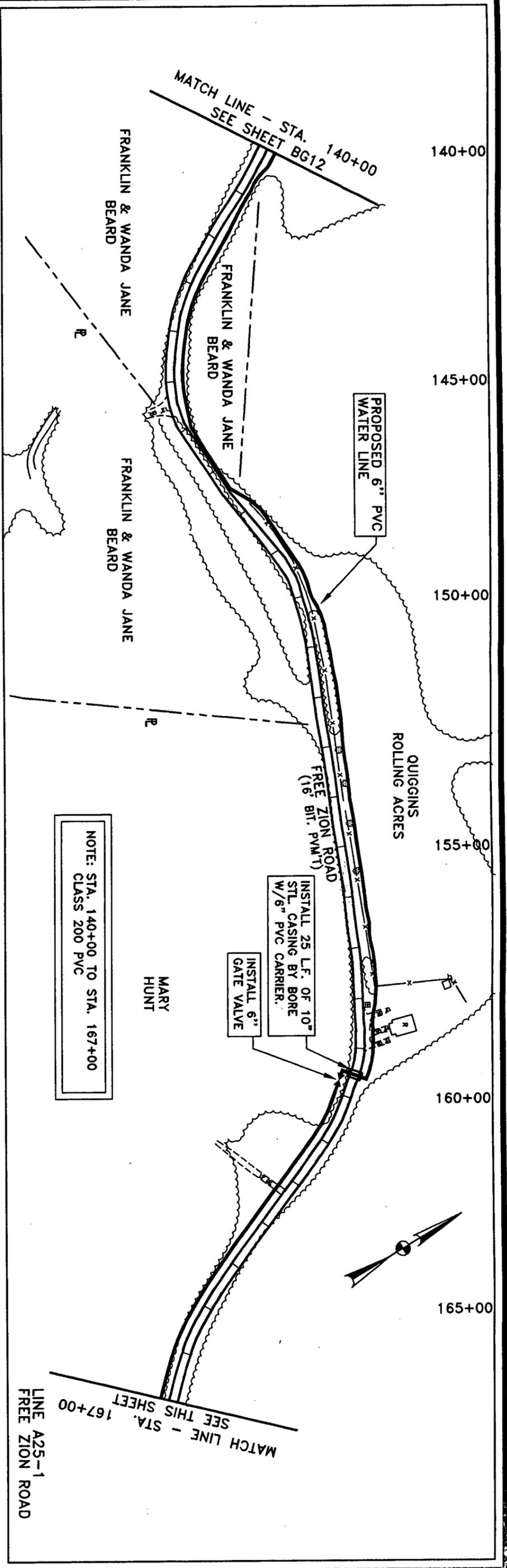
JEFF D. PENNINGTON  
No. 20469  
Exp. 12/31/99

**HMB**  
Hayworth, Meyer & Boley, Inc.  
ENGINEERS • ARCHITECTS • PLANNERS

DESIGNED BY: LWC  
CHECKED BY: JDR  
DRAWN BY: DDM

DATE: 05/05/99  
SCALE: 1" = 200'  
DWG. NAME: A2588

BG12

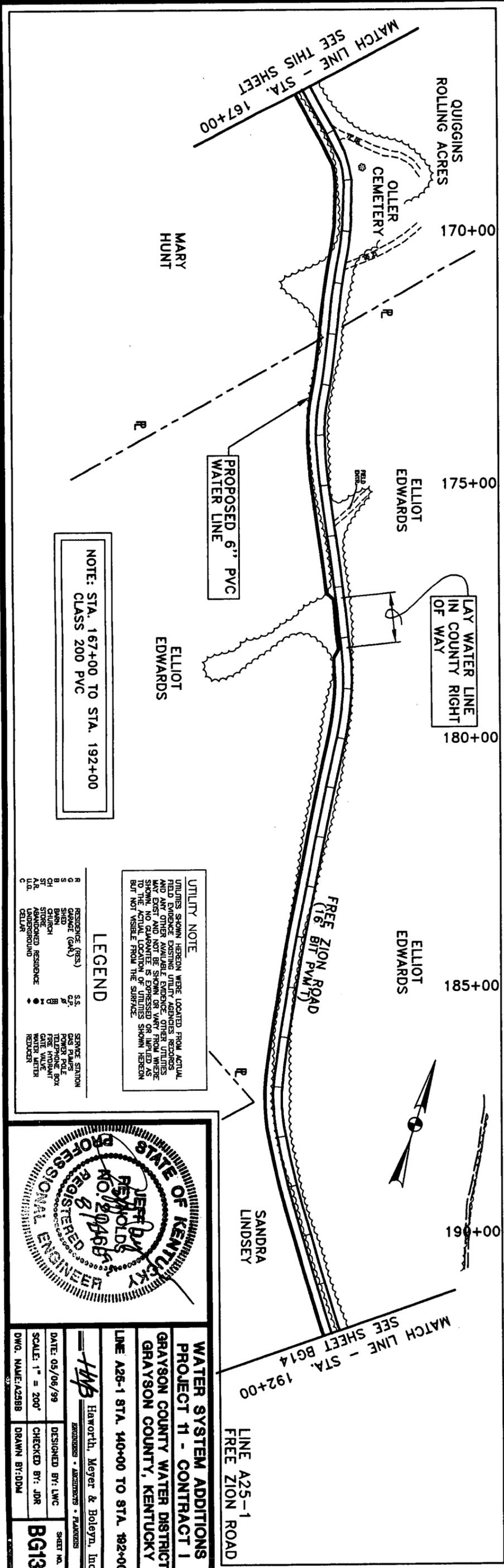


NOTE: STA. 140+00 TO STA. 167+00  
CLASS 200 PVC

INSTALL 6"  
GATE VALVE

INSTALL 25 LF. OF 10"  
STL. CASING BY BORE  
W/6" PVC CARRIER.

FREE ZION ROAD  
(16' BIT. P.V.M.T.)



NOTE: STA. 167+00 TO STA. 192+00  
CLASS 200 PVC

PROPOSED 6" PVC  
WATER LINE

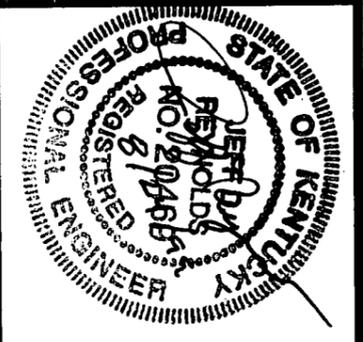
LAY WATER LINE  
IN COUNTY RIGHT  
OF WAY

FREE ZION ROAD  
(16' BIT. P.V.M.T.)

**UTILITY NOTE**  
UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL FIELD EVIDENCE EXISTING UTILITY AGENCIES RECORDS AND ANY OTHER AVAILABLE EVIDENCE. OTHER UTILITIES MAY EXIST AND NOT BE SHOWN OR VARY FROM WHERE SHOWN. NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACCURACY OF THE INFORMATION SHOWN HEREON BUT NOT VISIBLE FROM THE SURFACE.

**LEGEND**

R	RESURFACE (FEET)	S.S.	SEWER STATION
S	SHED	S.S.	GAS PIPING
B	BARN	S.S.	POWER POLE
CH	CHURCH	S.S.	TELEPHONE BOX
AVR	ADVANCED RESIDENCE	S.S.	FIRE HYDRANT
U	UNDERGROUND	S.S.	WATER METER
C	CELLAR	S.S.	REDUCER



**WATER SYSTEM ADDITIONS  
PROJECT #1 - CONTRACT 1  
GRAYSON COUNTY WATER DISTRICT  
GRAYSON COUNTY, KENTUCKY**

LINE A25-1 STA. 140+00 TO STA. 192+00

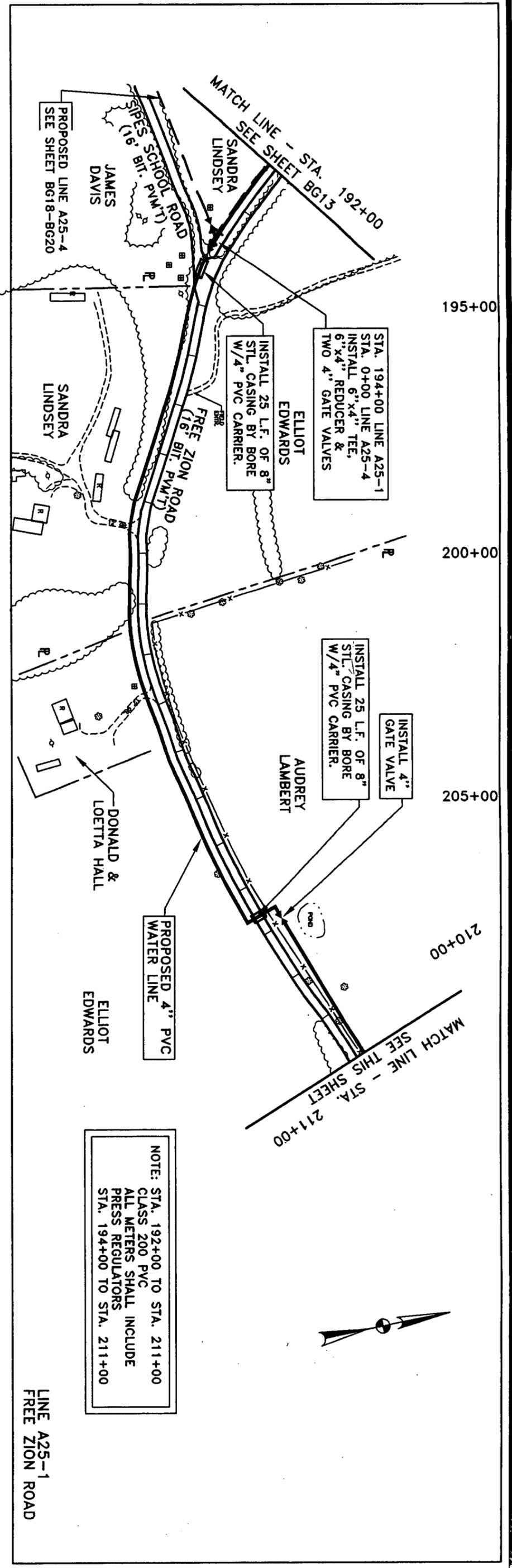
LINE A25-1  
FREE ZION ROAD

DATE: 05/06/99  
SCALE: 1" = 200'  
DWG. NAME: A25B8

DESIGNED BY: LWC  
CHECKED BY: JDR  
DRAWN BY: JDM

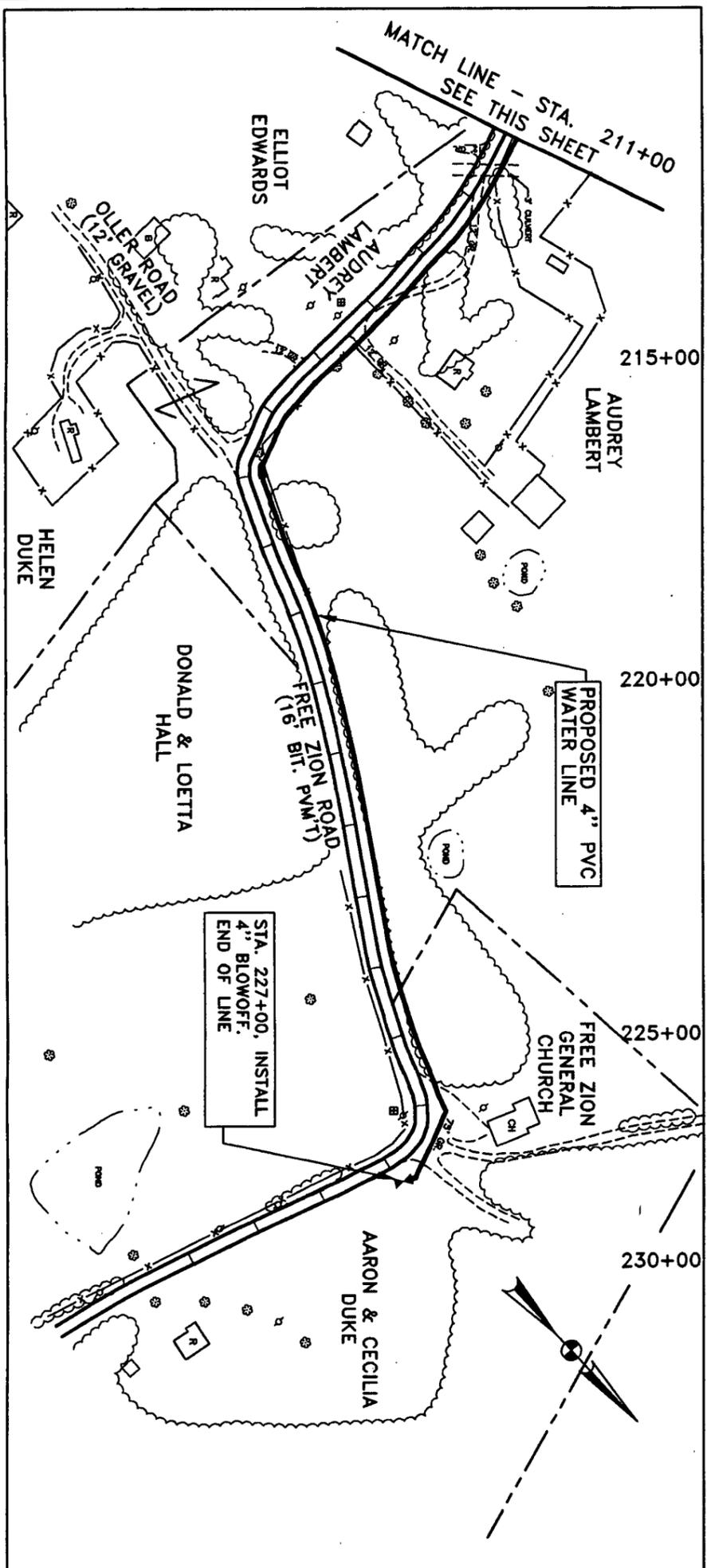
SHEET NO.  
**BG13**

EXPIRES: 5/31/2005  
Haworth, Meyer & Boleyn, Inc.



NOTE: STA. 192+00 TO STA. 211+00  
 CLASS 200 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 194+00 TO STA. 211+00

LINE A25-1  
 FREE ZION ROAD



NOTE: STA. 211+00 TO STA. 227+00  
 CLASS 200 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 211+00 TO STA. 227+00

LINE A25-1  
 FREE ZION ROAD

UTILITY NOTE  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL  
 FIELD EVIDENCE EXISTING UTILITY AGENCIES RECORDS  
 AND ANY OTHER AVAILABLE EVIDENCE. OTHER UTILITIES  
 MAY EXIST AND NOT BE SHOWN OR VARY FROM WHERE  
 SHOWN. THE LOCATION OF UTILITIES SHOWN HEREON  
 BUT NOT VISIBLE FROM THE SURFACE.

LEGEND

R	RESIDENCE (RES.)	S.S.	SERVICE STATION
G	GAZE (GAZ.)	CP	GAS PIPES
S	SHED	TR	TELEPHONE POLE
CH	CHURCH	ST	STREET LIGHT
ST	STORE	WM	WATER METER
A.R.	ABANDONED RESIDENCE	RE	REDUCER
U.C.	UNDERGROUND		

**STATE OF KENTUCKY**  
**REGISTERED ENGINEER**  
**JEFF D. REMONDS**  
 No. 22099

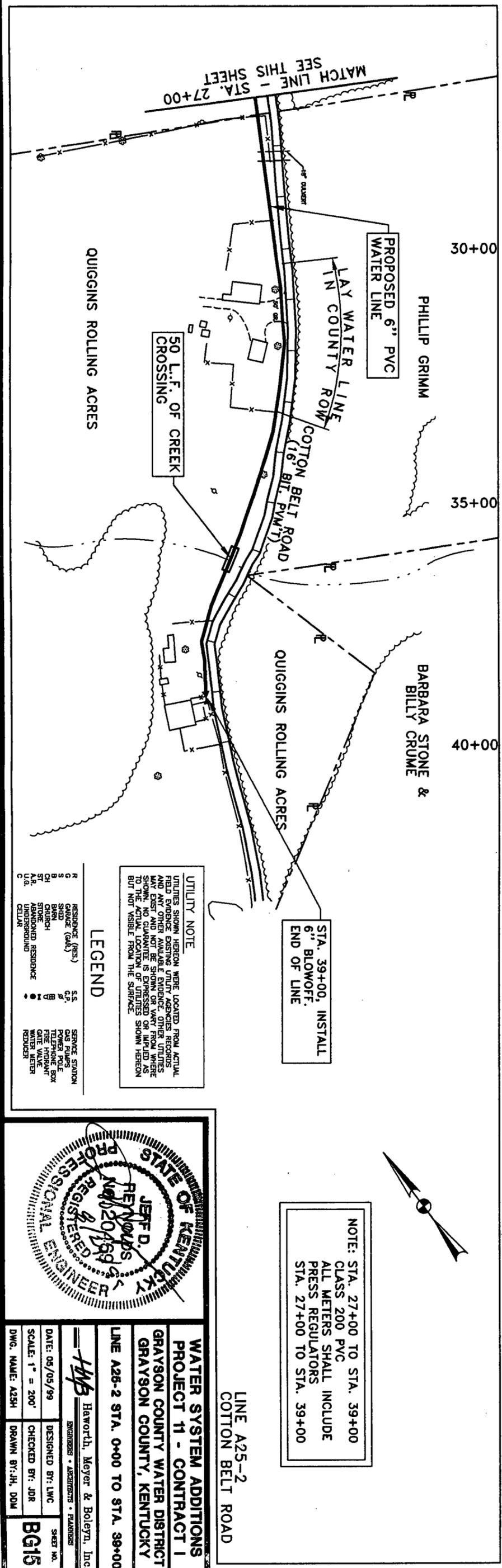
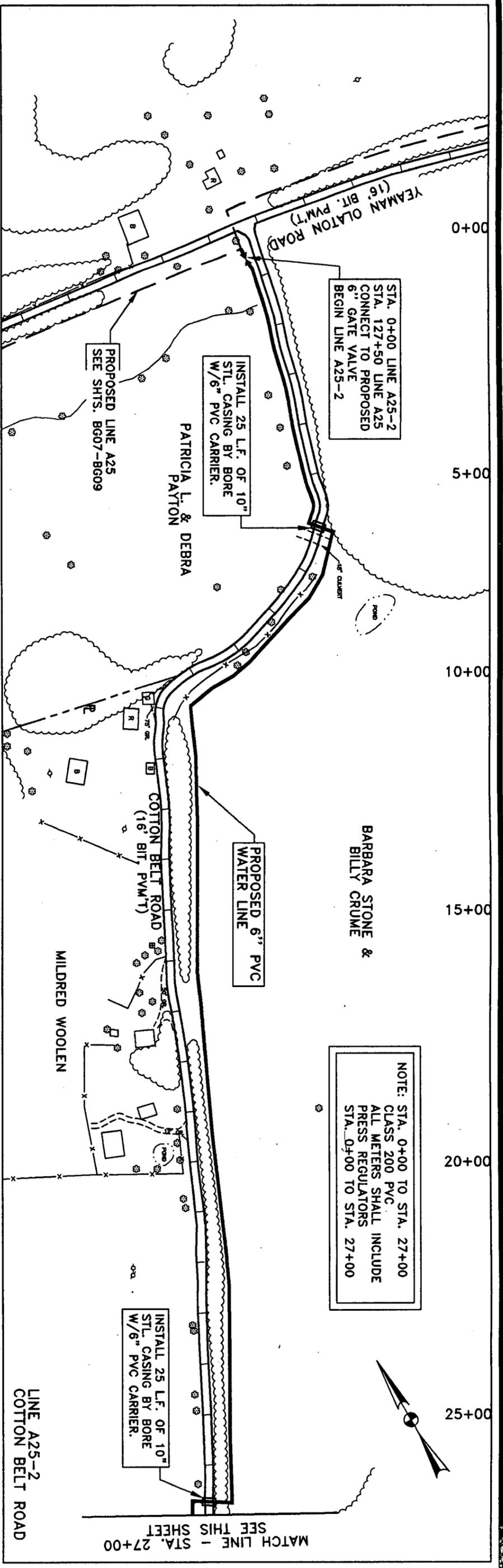
**WATER SYSTEM ADDITIONS**  
**PROJECT #1 - CONTRACT 1**  
**GRAYSON COUNTY WATER DISTRICT**  
**GRAYSON COUNTY, KENTUCKY**

LINE A25-1 STA. 192+00 TO STA. 227+00

DATE: 05/05/99  
 SCALE: 1" = 200'  
 DWG. NAME: A2588

DESIGNED BY: LWC  
 CHECKED BY: JOR  
 DRAWN BY: DDM

SHEET NO.  
**BG14**



NOTE: STA. 0+00 TO STA. 27+00  
 CLASS 200 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 0+00 TO STA. 27+00

NOTE: STA. 27+00 TO STA. 39+00  
 CLASS 200 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 27+00 TO STA. 39+00

**UTILITY NOTE**  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL FIELD SURVEYS. EXISTING UTILITIES, RECORDS, AND ANY OTHER AVAILABLE EVIDENCE, OTHER UTILITIES MAY EXIST AND NOT BE SHOWN OR IMPLIED AS SHOWN. NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACTUAL LOCATION OF UTILITIES SHOWN HEREON BUT NOT VISIBLE FROM THE SURFACE.

**LEGEND**

- |    |                  |      |                 |
|----|------------------|------|-----------------|
| R  | RESIDENCE (RES.) | S.S. | SERVICE STATION |
| G  | GRAVE (GRV)      | G.P. | GAZ PUMP        |
| B  | BARN             | B    | BATTERY         |
| CH | CHURCH           | ⊙    | TELEPHONE BOX   |
| ST | STONE            | ⊙    | FIRE HYDRANT    |
| UD | UNDERSOIL        | ⊙    | GATE VALVE      |
| C  | CELLAR           | ⊙    | WATER METER     |
|    |                  | ⊙    | METER           |



**WATER SYSTEM ADDITIONS**  
**PROJECT 11 - CONTRACT 1**  
 GRAYSON COUNTY WATER DISTRICT  
 GRAYSON COUNTY, KENTUCKY

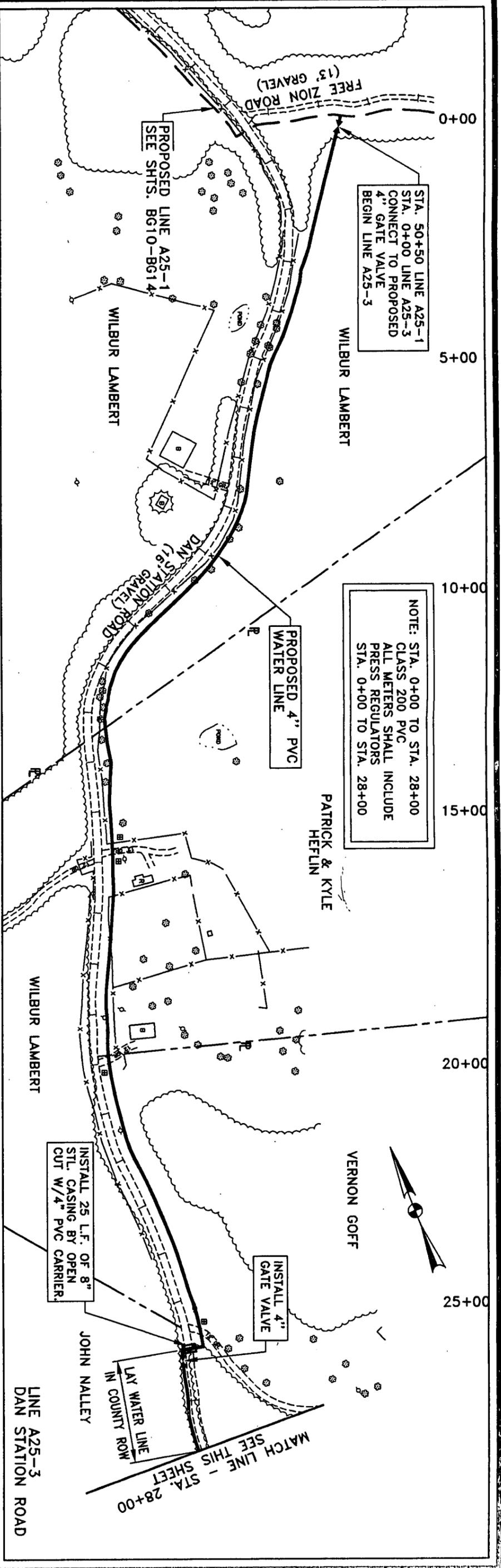
LINE A25-2 STA. 0+00 TO STA. 39+00

**HMB** Haworth, Meyer & Bolyard, Inc.  
 ENGINEERS & ARCHITECTS - PLANNERS

DATE: 02/05/99  
 SCALE: 1" = 200'  
 DWG. NAME: A25H

DESIGNED BY: LWC  
 CHECKED BY: JDR  
 DRAWN BY: JH, DDM

SHEET NO. **BG15**



STA. 50+50 LINE A25-1  
 STA. 0+00 LINE A25-3  
 CONNECT TO PROPOSED  
 4" GATE VALVE  
 BEGIN LINE A25-3

NOTE: STA. 0+00 TO STA. 28+00  
 CLASS 200 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 0+00 TO STA. 28+00

PROPOSED 4" PVC  
 WATER LINE

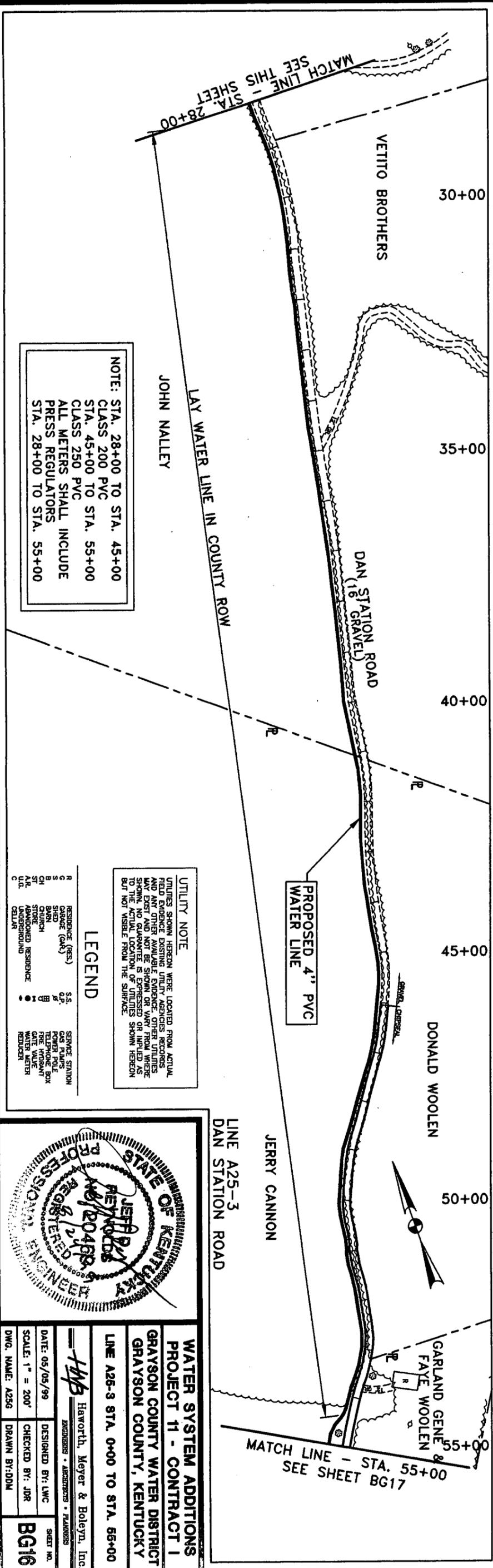
INSTALL 25 L.F. OF 8"  
 STL. CASING BY OPEN  
 CUT W/4" PVC CARRIER.

INSTALL 4"  
 GATE VALVE

LAY WATER LINE  
 IN COUNTY ROW

MATCH LINE - STA. 28+00  
 SEE THIS SHEET

LINE A25-3  
 DAN STATION ROAD



LAY WATER LINE IN COUNTY ROW  
 JOHN NALLEY

PROPOSED 4" PVC  
 WATER LINE

LINE A25-3  
 DAN STATION ROAD

MATCH LINE - STA. 55+00  
 SEE SHEET BG17

NOTE: STA. 28+00 TO STA. 45+00  
 CLASS 200 PVC  
 STA. 45+00 TO STA. 55+00  
 CLASS 250 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 28+00 TO STA. 55+00

UTILITY NOTE  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL  
 FINDINGS. SHOWN EXCEPT UTILITIES, LINES, RECORDS  
 AND ANY OTHER AVAILABLE EVIDENCE. OTHER UTILITIES  
 MAY EXIST AND NOT BE SHOWN OR VARY FROM WHERE  
 SHOWN. NO GUARANTEE IS EXPRESSED OR IMPLIED AS  
 TO THE ACTUAL LOCATION OF UTILITIES SHOWN HEREON  
 BUT NOT VISIBLE FROM THE SURFACE.

LEGEND

R	RESIDENCE (RES.)	S.S.	SERVICE STATION
S	SHED (SH)	G.P.	SEWER MAIN
B	BARN	B	TELEPHONE BOX
CH	CHURCH	M	FIRE HYDRANT
ST	STONE	W	GATE VALVE
W	WATER	U	UNDERGROUND
UC	UNDERGROUND	C	CELLAR



**WATER SYSTEM ADDITIONS**  
**PROJECT 11 - CONTRACT 1**  
**GRAYSON COUNTY WATER DISTRICT**  
**GRAYSON COUNTY, KENTUCKY**

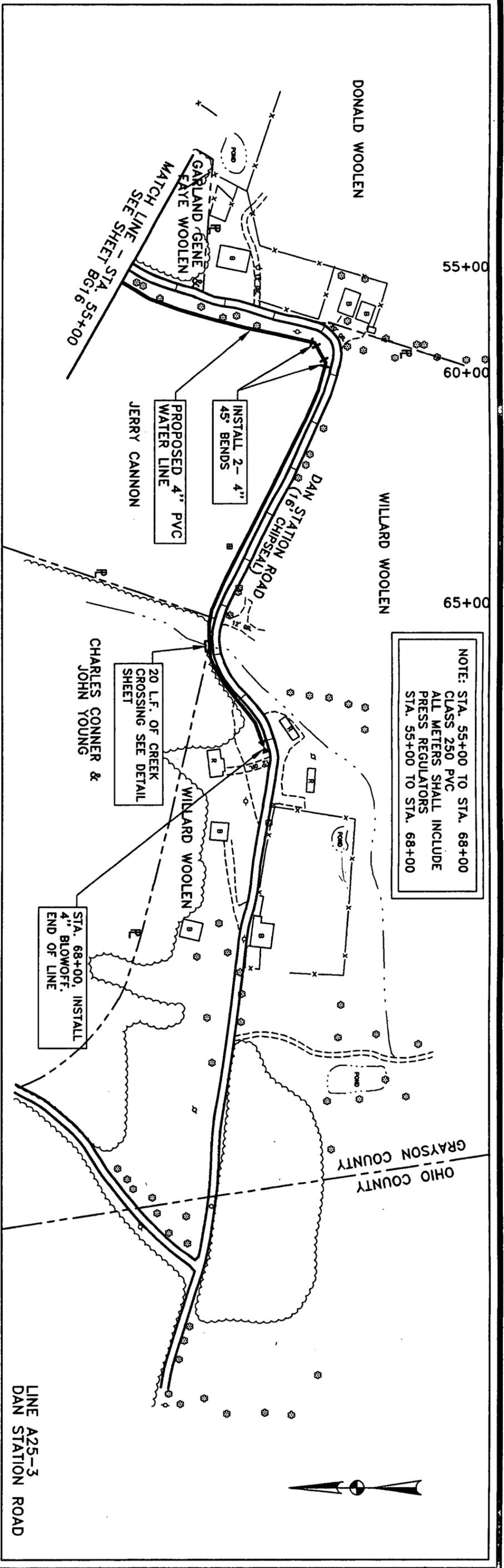
LINE A25-3 STA. 0+00 TO STA. 55+00

DATE: 05/05/99  
 SCALE: 1" = 200'  
 DWG. NAME: A25G

DESIGNED BY: LMC  
 CHECKED BY: JDR  
 DRAWN BY: DDW

SHEET NO. **BG16**

Engineers - Architects - Planners  
 Haworth, Meyer & Boleyn, Inc.

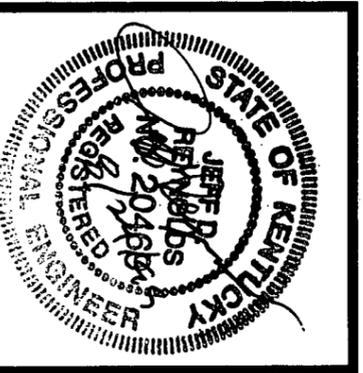


NOTE: STA. 55+00 TO STA. 68+00  
 CLASS 250 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 55+00 TO STA. 68+00

UTILITY NOTE  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL  
 FIELD EVIDENCE EXISTING UTILITIES AGENCIES RECORDS  
 AND SURVEY DATA. THE LOCATION OF UTILITIES  
 AND THE DEPTH AND TYPE OF UTILITIES  
 SHOWN, NO GUARANTEE IS EXPRESSED OR IMPLIED AS  
 TO THE ACTUAL LOCATION OF UTILITIES SHOWN HEREON  
 BUT NOT VISIBLE FROM THE SURFACE.

LEGEND

R	RESIDENCE (RES.)	S.S.	SERVICE STATION
G	GARAGE (GAR.)	G.P.	GAS PUMPS
S	SHED	P	POWER POLE
CH	CHURCH	FB	TELEPHONE BOX
ST	STORE	W	WATER METER
A.R.	ABANDONED RESIDENCE	W.R.	WATER REDUCER
C	CULVERT		



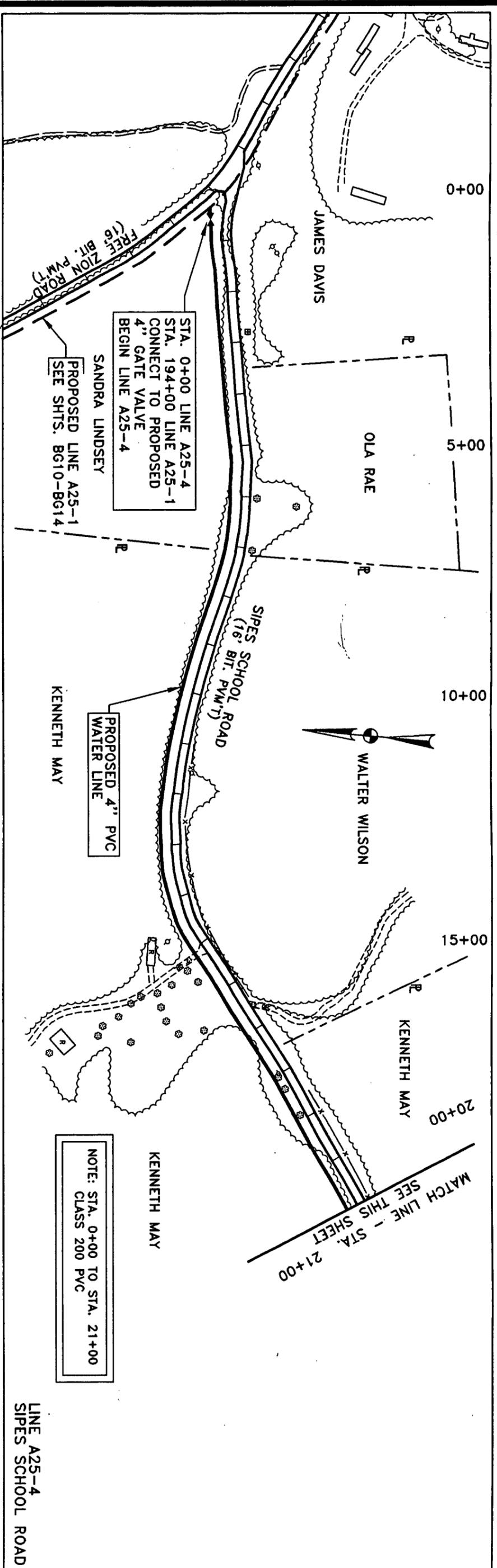
**WATER SYSTEM ADDITIONS**  
**PROJECT 11 - CONTRACT 1**  
 GRAYSON COUNTY WATER DISTRICT  
 GRAYSON COUNTY, KENTUCKY

LINE A25-3 STA. 55+00 TO STA. 68+00

**HMB** Haworth, Meyer & Boley, Inc.  
 ENGINEERS • ARCHITECTS • PLANNERS

DATE: 05/05/99 DESIGNED BY: LWC  
 SCALE: 1" = 200' CHECKED BY: JDR  
 DWG. NAME: A256 DRAWN BY: JDM

**BG17**



STA. 0+00 LINE A25-4  
STA. 194+00 LINE A25-1  
CONNECT TO PROPOSED  
4" GATE VALVE  
BEGIN LINE A25-4

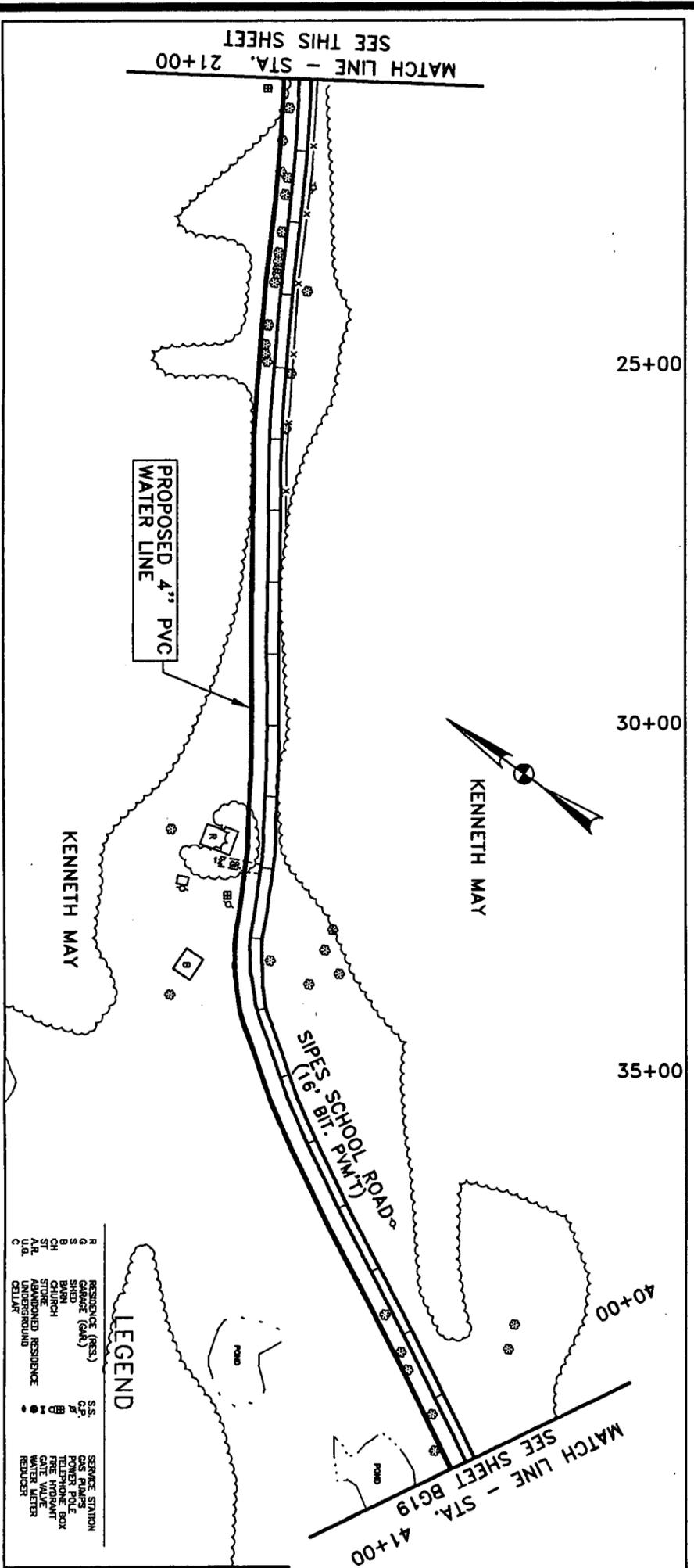
SANDRA LINDSEY  
PROPOSED LINE A25-1  
SEE SHTS. BG10-BG14

PROPOSED 4" PVC  
WATER LINE

KENNETH MAY

NOTE: STA. 0+00 TO STA. 21+00  
CLASS 200 PVC

LINE A25-4  
SIPES SCHOOL ROAD



PROPOSED 4" PVC  
WATER LINE

KENNETH MAY

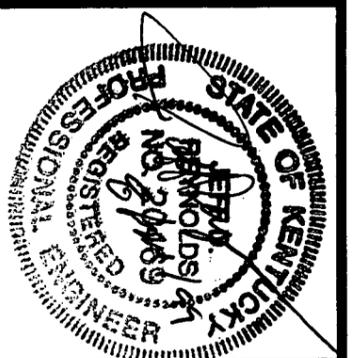
LEGEND

- |      |                     |        |                |
|------|---------------------|--------|----------------|
| R    | RESIDENCE (RES.)    | S.S.   | SEWER STATION  |
| G    | GARAGE (GAR.)       | g      | POWER POLE     |
| S    | SHED                | g'     | TELEPHONE BOX  |
| B    | BARN                | g''    | FREE INVOICANT |
| CH   | CHURCH              | g'''   | WATER METER    |
| SR   | STATION             | g''''  | REDUCER        |
| AR   | ABANDONED RESIDENCE | g''''' |                |
| U.R. | UNDERGROUND         |        |                |
| C    | CELLAR              |        |                |

NOTE: STA. 21+00 TO STA. 41+00  
CLASS 200 PVC  
ALL METERS SHALL INCLUDE  
PRESS REGULATORS  
STA. 35+00 TO STA. 41+00

UTILITY NOTE  
UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL  
FIELD EVIDENCE EXISTING UTILITIES AGENCIES RECORDS  
MAY EXIST AND NOT BE SHOWN OR VARY FROM WHERE  
SHOWN. NO GUARANTEE IS EXPRESSED OR IMPLIED AS  
TO THE ACTUAL LOCATION OF UTILITIES SHOWN HEREON  
BUT NOT VISIBLE FROM THE SURFACE.

LINE A25-4  
SIPES SCHOOL ROAD



**WATER SYSTEM ADDITIONS**  
**PROJECT 11 - CONTRACT 1**  
**GRAYSON COUNTY WATER DISTRICT**  
**GRAYSON COUNTY, KENTUCKY**

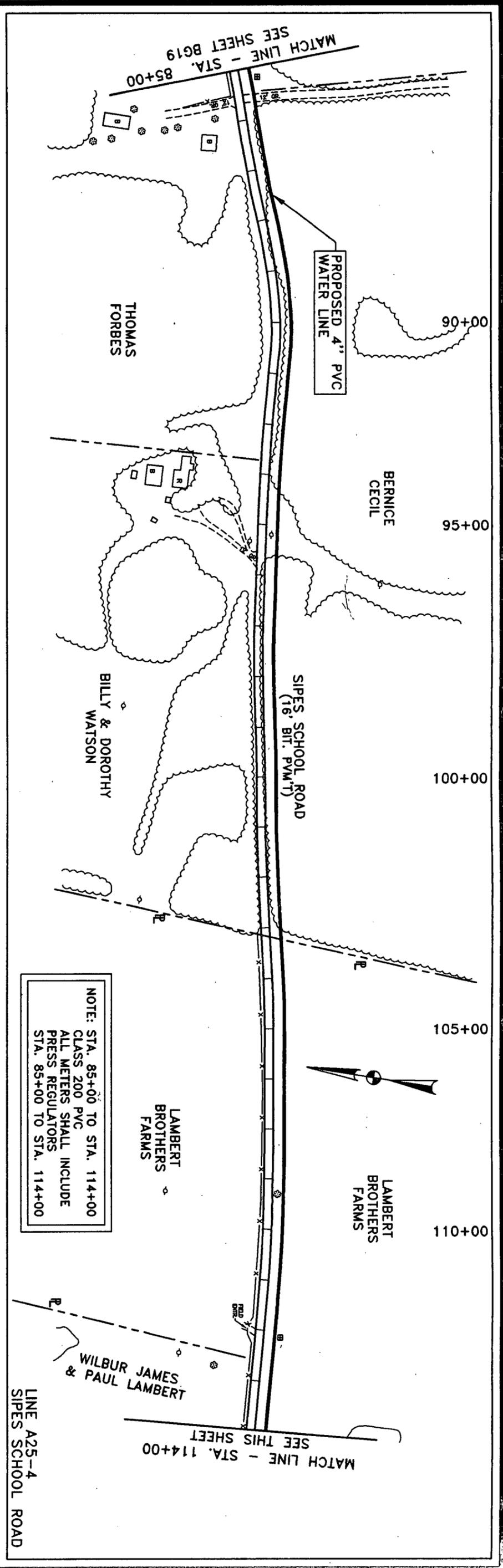
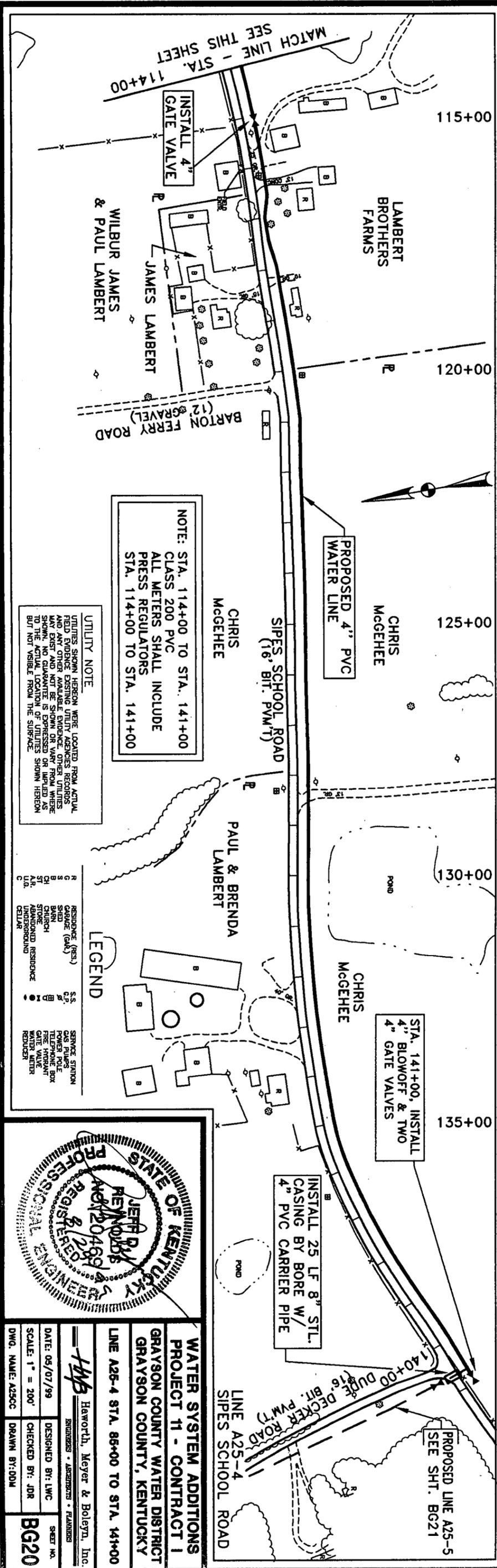
LINE A25-4 STA. 0+00 TO STA. 41+00

**HMB** Hayorth, Meyer & Boley, Inc.  
ENGINEERS • ARCHITECTS • PLANNERS

DATE: 05/07/99 DESIGNED BY: LWC  
SCALE: 1" = 200' CHECKED BY: JDR  
DWG. NAME: A25CC DRAWN BY: JDM

SHEET NO. **BG18**



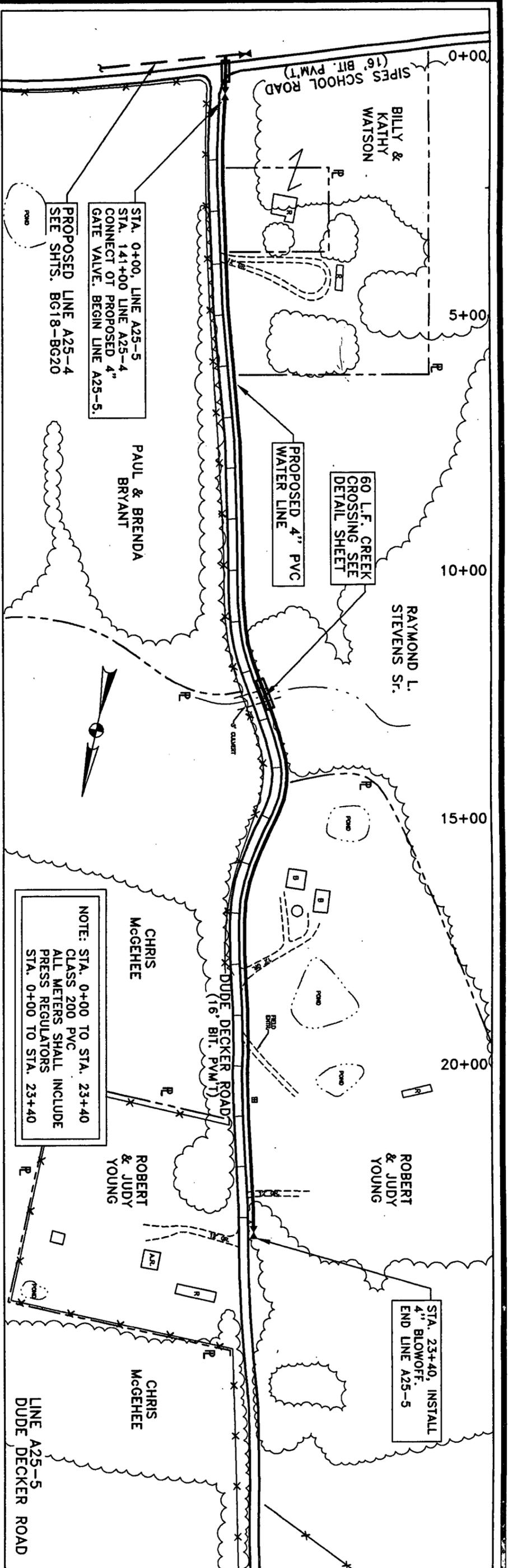


**WATER SYSTEM ADDITIONS  
PROJECT 11 - CONTRACT 1  
GRAYSON COUNTY WATER DISTRICT  
GRAYSON COUNTY, KENTUCKY**

LINE A25-4 STA. 85+00 TO STA. 141+00

**HMB** Haworth, Meyer & Boleyn, Inc.  
DESIGNED BY: LWC  
CHECKED BY: JDR  
DRAWN BY: DDM

DATE: 05/07/99  
SCALE: 1" = 200'  
SHEET NO. **BG20**  
DWG. NAME: A25C  
DRAWN BY: DDM



STA. 0+00, LINE A25-5  
 STA. 141+00 LINE A25-4  
 CONNECT OT PROPOSED 4"  
 GATE VALVE. BEGIN LINE A25-5.

PROPOSED LINE A25-4  
 SEE SHTS. BG18-BG20

60 L.F. CREEK  
 CROSSING SEE  
 DETAIL SHEET

PROPOSED 4" PVC  
 WATER LINE

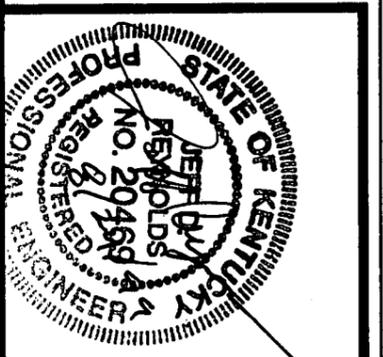
NOTE: STA. 0+00 TO STA. 23+40  
 CLASS 200 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 0+00 TO STA. 23+40

STA. 23+40, INSTALL  
 4" BLOWOFF.  
 END LINE A25-5

**UTILITY NOTE**  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL  
 FIELD EVIDENCE EXISTING UTILITY AGENCIES RECORDS  
 AND ANY OTHER AVAILABLE EVIDENCE. OTHER UTILITIES  
 MAY EXIST AND NOT BE SHOWN OR VARY FROM WHERE  
 SHOWN. NO GUARANTEE IS EXPRESSED OR IMPLIED AS  
 TO THE ACCURACY OF THE UTILITIES SHOWN HEREON  
 BUT NOT VISIBLE FROM THE SURFACE.

**LEGEND**

R	RESIDENCE (PES)	S.S.	SEWER STATION
G	GARAGE (GAR)	S	SEWER MAIN
S	SHED	B	POWER POLE
B	BARN	CH	TELEPHONE BOX
CH	CHURCH	W	FIRE HYDRANT
SR	STANDARD RESIDENCE	WA	WATER METER
AR	ABANDONED RESIDENCE	RD	REDUCER
UL	UTILITY	C	CELLAR



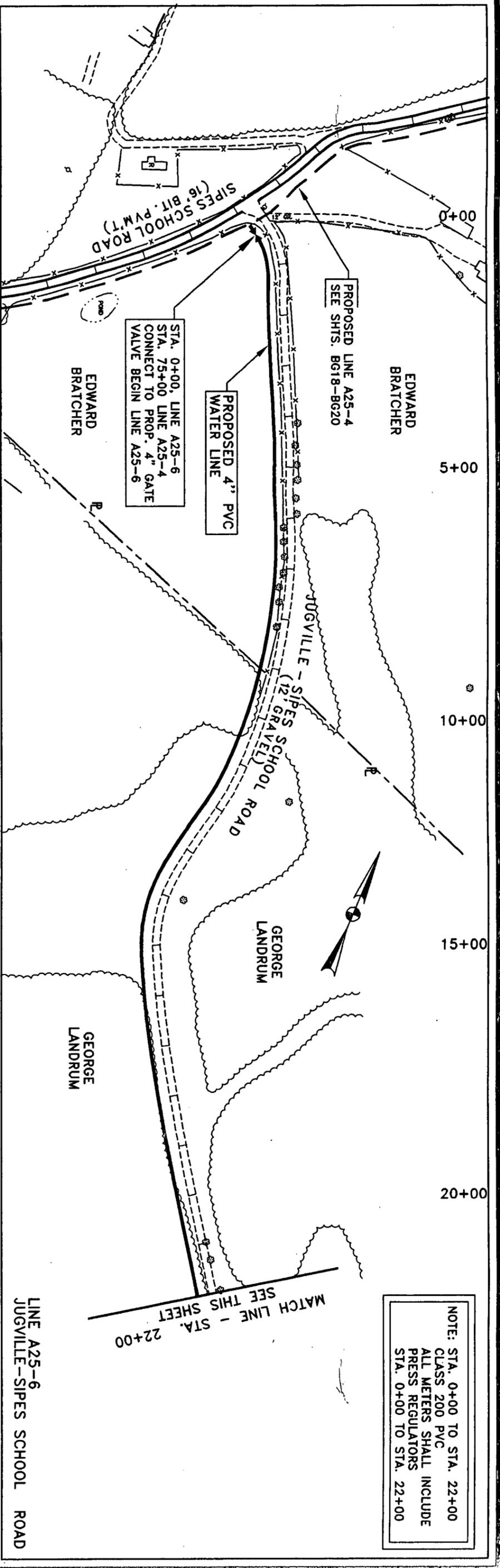
**WATER SYSTEM ADDITIONS  
 PROJECT 11 - CONTRACT 1  
 GRAYSON COUNTY WATER DISTRICT  
 GRAYSON COUNTY, KENTUCKY**

LINE A25-6 STA. 0+00 TO STA. 23+40

1415 Haworth, Meyer & Boleyn, Inc.  
 ENGINEERS • ARCHITECTS • PLANNERS

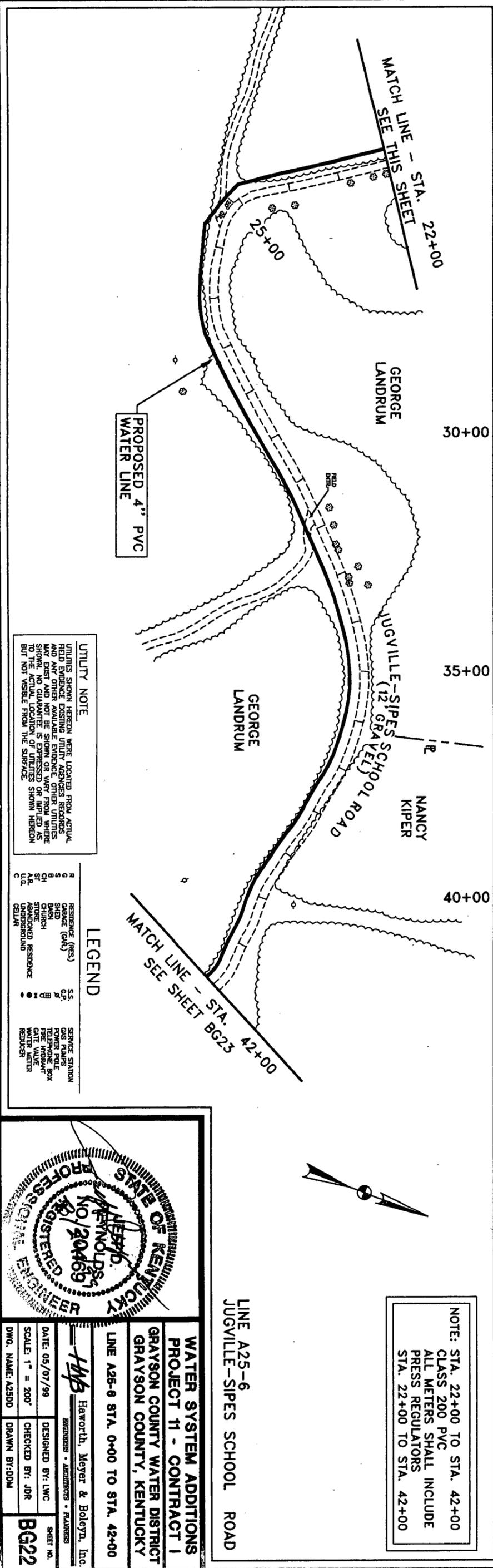
DATE: 04/23/99 DESIGNED BY: LWC  
 SCALE: 1" = 200' CHECKED BY: JDR  
 DWG. NAME: A21 DRAWN BY: JH, DDM

SHEET NO.  
**BG21**



NOTE: STA. 0+00 TO STA. 22+00  
 CLASS 200 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 0+00 TO STA. 22+00

LINE A25-6  
 JUGVILLIE-SIPES SCHOOL ROAD



NOTE: STA. 22+00 TO STA. 42+00  
 CLASS 200 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 22+00 TO STA. 42+00

LINE A25-6  
 JUGVILLIE-SIPES SCHOOL ROAD

PROPOSED 4" PVC  
 WATER LINE

PROPOSED 4" PVC  
 WATER LINE

UTILITY NOTE  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL  
 FIELD EVIDENCE EXISTING UTILITIES RECORDS  
 AND EXISTING UTILITIES RECORDS. ENGINEER  
 HAS CONDUCTED VISUAL SURVEY OF UTILITIES  
 SHOWN. NO GUARANTEE IS EXPRESSED OR IMPLIED AS  
 TO THE ACTUAL LOCATION OF UTILITIES SHOWN HEREON  
 BUT NOT VISIBLE FROM THE SURFACE.

LEGEND

R	RESIDENCE (RES.)	S.S.	SERVICE STATION
S	SHED	B	POWER POLE
B	BARN	F	FIRE HYDRANT
CH	CHURCH	W	WATER METER
AR	ABANDONED RESIDENCE	•	WATER REDUCER
UG	UNDERGROUND CELLAR		

**STATE OF KENTUCKY**  
**REGISTERED PROFESSIONAL ENGINEER**  
 HENRY D. HENOLD, P.E.  
 No. 20469

**WATER SYSTEM ADDITIONS**  
**PROJECT 11 - CONTRACT 1**  
**GRAYSON COUNTY WATER DISTRICT**  
**GRAYSON COUNTY, KENTUCKY**

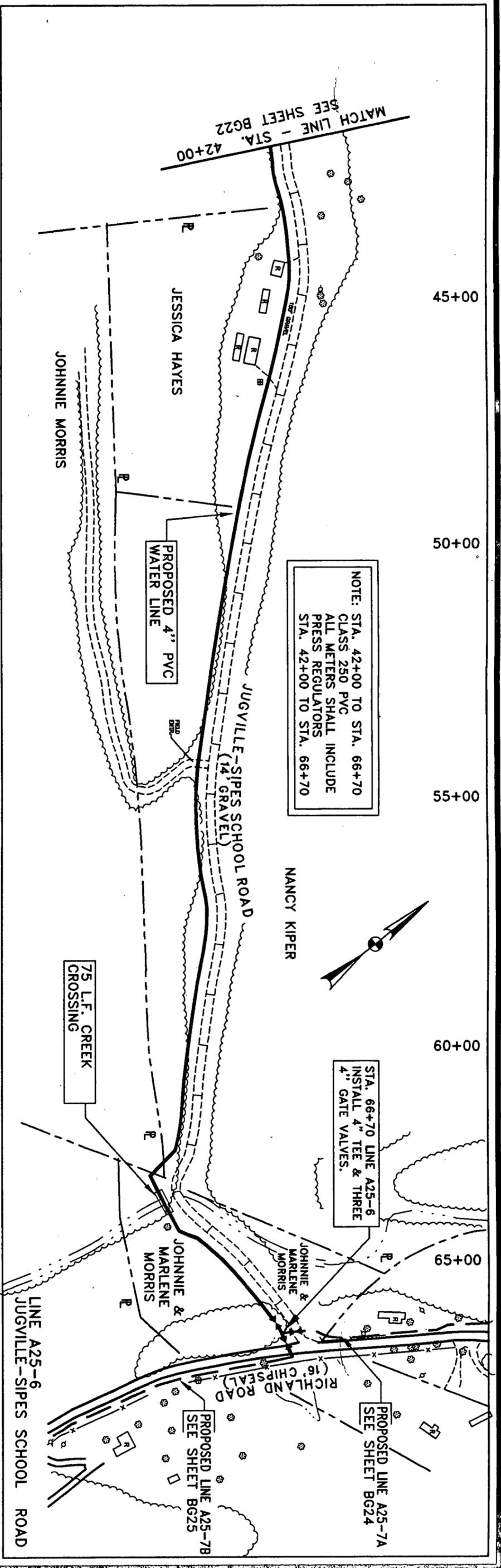
LINE A25-6 STA. 0+00 TO STA. 42+00

SHEET NO. **BG22**

DESIGNED BY: LWC  
 CHECKED BY: JDR  
 DRAWN BY: JDM

DATE: 05/07/99  
 SCALE: 1" = 200'  
 DWG. NAME: A25DD

HMB  
 HAWORTH, MEYER & BOLEY, INC.  
 ENGINEERS - ARCHITECTS - PLANNERS



NOTE: STA. 42+00 TO STA. 66+70  
 CLASS 250 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 42+00 TO STA. 66+70

STA. 66+70 LINE A25-6  
 INSTALL 4" TEE & THREE  
 4" GATE VALVES.

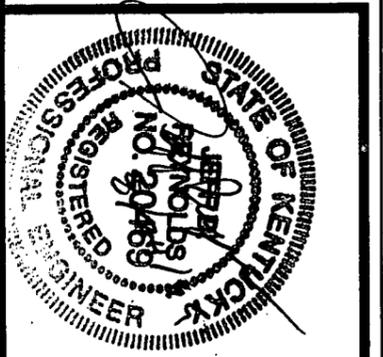
PROPOSED LINE A25-7A  
 SEE SHEET BG24

PROPOSED LINE A25-7B  
 SEE SHEET BG25

**UTILITY NOTE**  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL FIELD EVIDENCE EXISTING UTILITY AGENCIES RECORDS AND ANY OTHER AVAILABLE EVIDENCE. OTHER UTILITIES MAY EXIST AND NOT BE SHOWN OR VARY FROM WHERE SHOWN. NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACCURACY OF THE INFORMATION SHOWN HEREON BUT NOT VISIBLE FROM THE SURFACE.

**LEGEND**

R	RESIDENCE (REAR)	S.S.	SEWER STATION
C	GARAGE (GAR.)	S.P.	SEWER PUMP
S	SHED	P	POWER POLE
B	BARN	TR	TRAILER
SH	SHED	FB	FIRE HYDRANT
SR	STATION	WB	WATER BOX
AR	ABANDONED RESIDENCE	WM	WATER METER
U	UNDERGROUND	WR	WATER REDUCER
C	CELLAR		



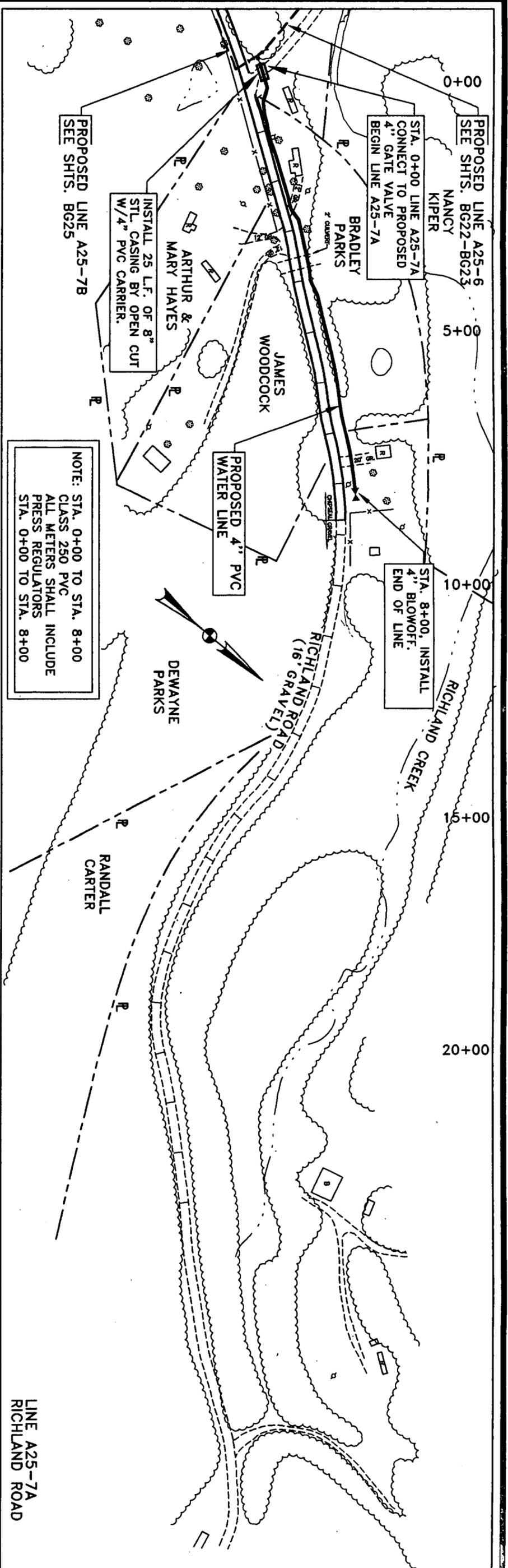
**WATER SYSTEM ADDITIONS**  
**PROJECT 11 - CONTRACT 1**  
 GRAYSON COUNTY WATER DISTRICT  
 GRAYSON COUNTY, KENTUCKY

LINE A28-8 STA. 42+00 TO STA. 96+70

11/15 Haworth, Meyer & Boleyn, Inc.  
 ENGINEERS • ARCHITECTS • PLANNERS

DATE: 05/07/99 DESIGNED BY: LWC  
 SCALE: 1" = 200' CHECKED BY: JIR  
 DWG. NAME: A2500 DRAWN BY: JDM

SHEET NO. **BG23**



NOTE: STA. 0+00 TO STA. 8+00  
 CLASS 250 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 0+00 TO STA. 8+00

PROPOSED LINE A25-7B  
 SEE SHTS. BG25

INSTALL 25 L.F. OF 8" STL. CASING BY OPEN CUT W/4" PVC CARRIER.

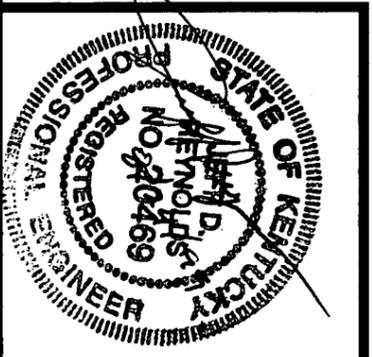
STA. 0+00 LINE A25-7A  
 CONNECT TO PROPOSED 4" GATE VALVE  
 BEGIN LINE A25-7A

STA. 8+00, INSTALL 4" BLOWOFF.  
 END OF LINE

**UTILITY NOTE**  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL FIELD EVIDENCE. EXISTING UTILITY AGENCIES RECORDS MAY BE INCOMPLETE AND NOT BE SHOWN OR LAPPED FROM SHOWN. NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACTUAL LOCATION OF UTILITIES SHOWN HEREON BUT NOT VISIBLE FROM THE SURFACE.

**LEGEND**

R	RESIDENCE (RES.)	S.S.	SERVICE STATION
G	GARAGE (GAR.)	G.P.	GAS PUMPS
S	SHED	P	POWER POLE
CH	CHURCH	TE	TELEPHONE BOX
ST	STONE	EV	ELECTRICAL VALVE
A.R.	ABANDONED RESIDENCE	W	WATER LETTER
C	CULVERT	RED	REDUCER



**WATER SYSTEM ADDITIONS**  
**PROJECT 11 - CONTRACT 1**  
 GRAYSON COUNTY WATER DISTRICT  
 GRAYSON COUNTY, KENTUCKY

LINE A25-7A STA. 0+00 TO STA. 8+00

**HMB** Haworth, Meyer & Boley, Inc.  
 ENGINEERS • ARCHITECTS • PLANNERS

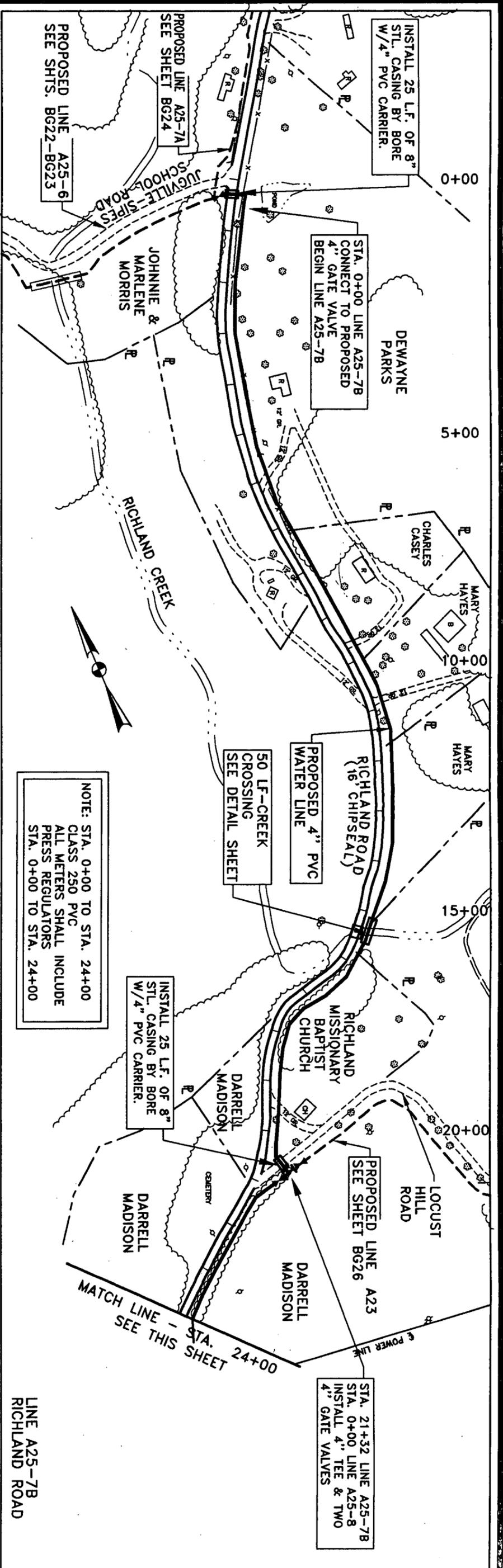
DATE: 05/10/99  
 SCALE: 1" = 200'  
 DWG. NAME: A25EE

DESIGNED BY: LWC  
 CHECKED BY: JDR  
 DRAWN BY: BDM

SHEET NO. **BG24**

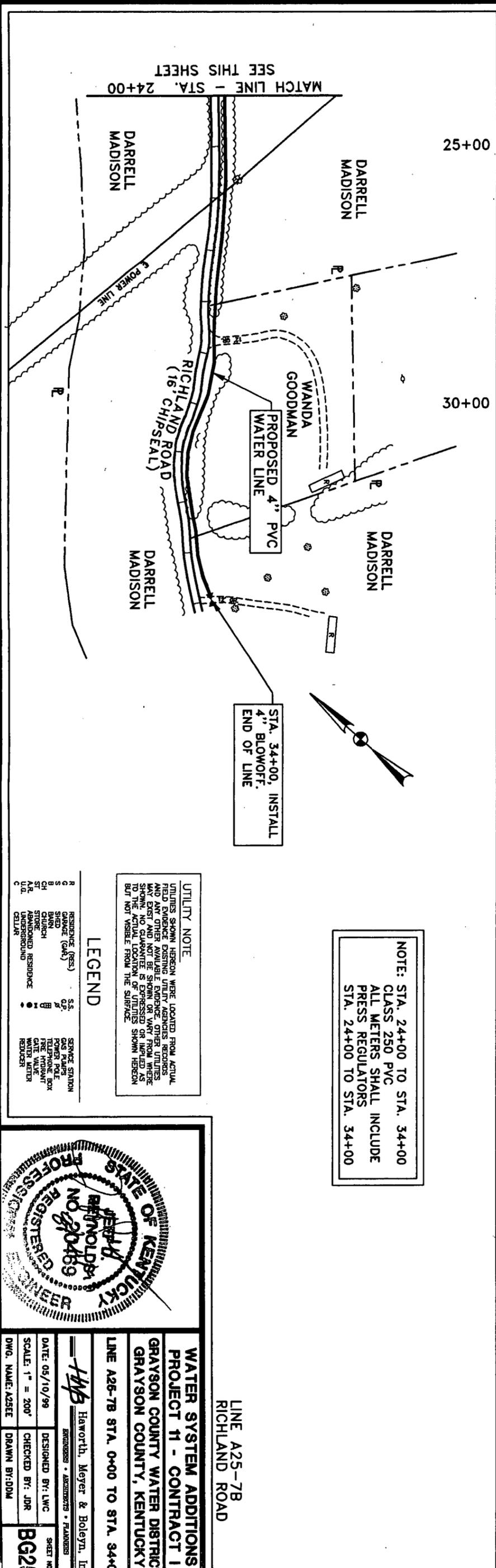
LINE A25-7A  
 RICHLAND ROAD

LINE A25-7A  
 RICHLAND ROAD



NOTE: STA. 0+00 TO STA. 24+00  
 CLASS 250 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 0+00 TO STA. 24+00

LINE A25-7B  
 RICHLAND ROAD



NOTE: STA. 24+00 TO STA. 34+00  
 CLASS 250 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 24+00 TO STA. 34+00

LINE A25-7B  
 RICHLAND ROAD

**UTILITY NOTE**  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL FIELD EVIDENCE EXISTING UTILITIES AGENCIES RECORDS AND ANY OTHER AVAILABLE EVIDENCE. OTHER UTILITIES MAY EXIST AND NOT BE SHOWN OR VARY FROM WHERE SHOWN. NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACCURACY OF THE LOCATION OF UTILITIES SHOWN HEREON BUT NOT VISIBLE FROM THE SURFACE.

**LEGEND**

R	RESIDENCE (RES.)	S.S.	SERVICE STATION
S	SHED (SH)	g	POWER POLE
BH	BARN	g	TELEPHONE BOX
CH	CHURCH	g	FIRE HYDRANT
AR	ABANDONED RESIDENCE	g	WATER METER
U.G.	UNDERGROUND	g	REDUCER
C	CELLAR		

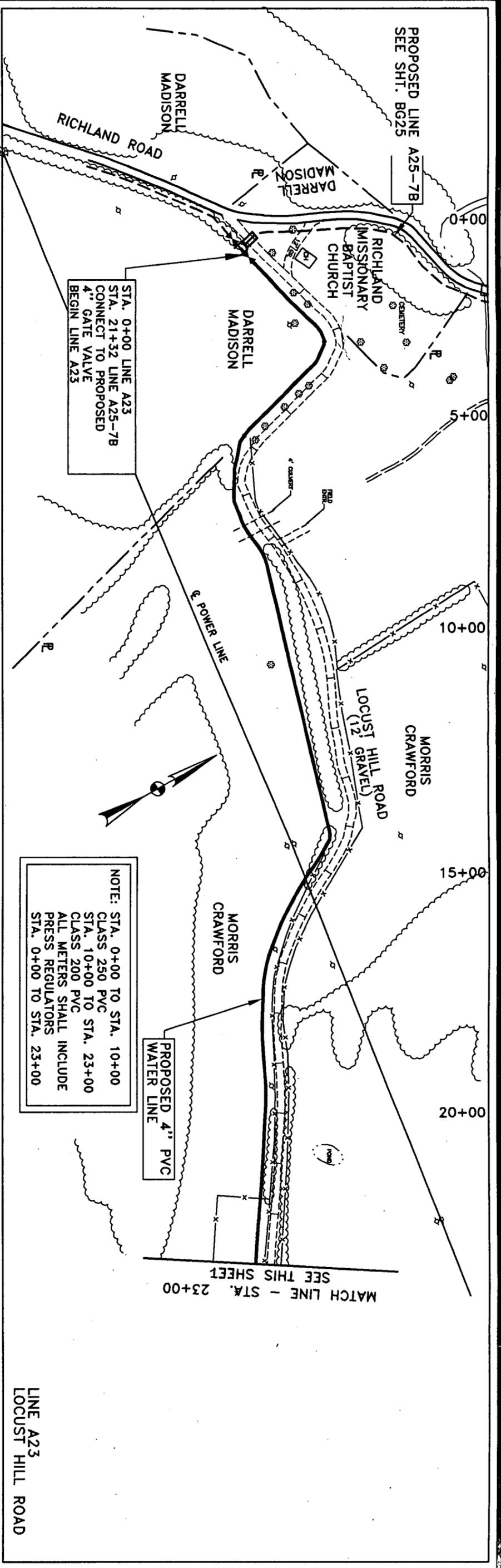


**WATER SYSTEM ADDITIONS**  
**PROJECT #1 - CONTRACT 1**  
 GRAYSON COUNTY WATER DISTRICT  
 GRAYSON COUNTY, KENTUCKY

LINE A26-7B STA. 0+00 TO STA. 34+00

**HMB** Harvorth, Meyer & Boleyn, Inc.  
 ENGINEERS • ARCHITECTS • PLANNERS

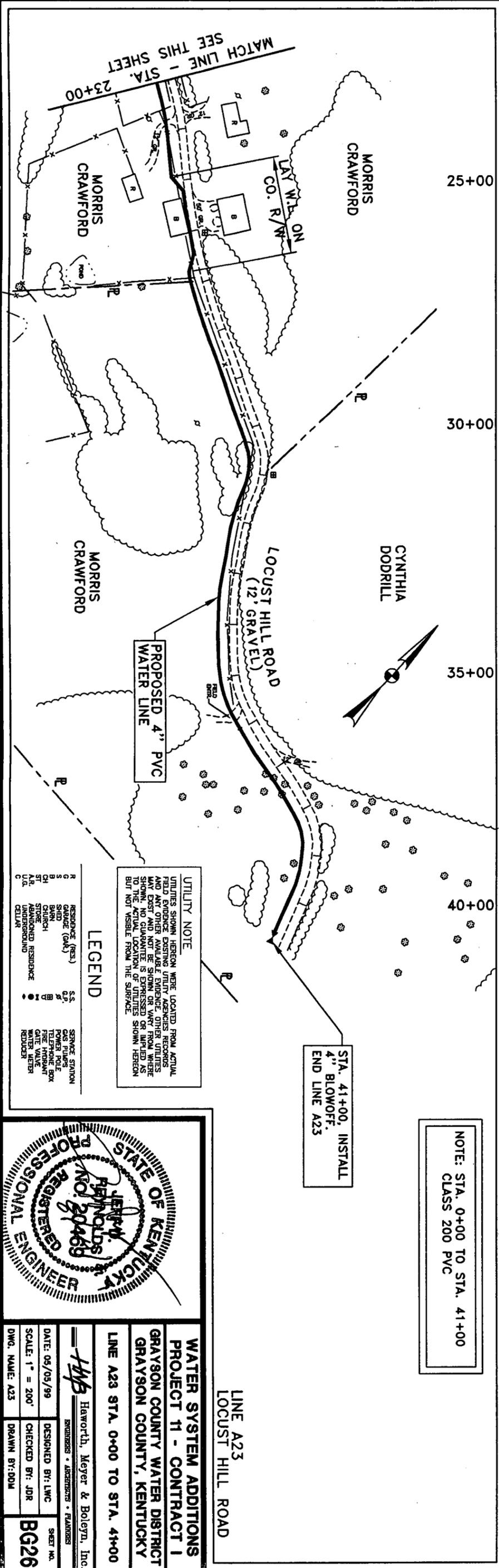
DATE: 08/10/99	DESIGNED BY: LWC	SHEET NO.
SCALE: 1" = 200'	CHECKED BY: JDR	<b>BG25</b>
DWG. NAME: A25EE	DRAWN BY: DDM	



NOTE: STA. 0+00 TO STA. 10+00  
 CLASS 250 PVC  
 STA. 10+00 TO STA. 23+00  
 CLASS 200 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 0+00 TO STA. 23+00

NOTE: STA. 0+00 TO STA. 41+00  
 CLASS 200 PVC

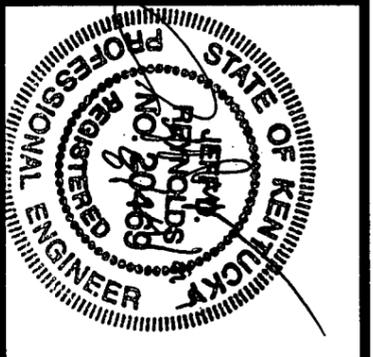
STA. 41+00, INSTALL  
 4" BLOWOFF,  
 END LINE A23



UTILITY NOTE  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL  
 FIELD EVIDENCE EXISTING UTILITY AGENCIES RECORDS  
 MAY EXIST AND NOT BE SHOWN OR LAYERS WHERE  
 SHOWN. NO GUARANTEE IS EXPRESSED OR IMPLIED AS  
 TO THE ACTUAL LOCATION OF UTILITIES SHOWN HEREON  
 BUT NOT VISIBLE FROM THE SURFACE.

**LEGEND**

R	RESIDENCE (RES.)	S.S.	SERVICE STATION
G	GARAGE (GAR.)	O.P.	ODS PUMP
S	SHED	R	POWER POLE
CH	CHURCH	ST	STONE
ST	STORE	AR	ABANDONED RESIDENCE
A.R.	ABANDONED RESIDENCE	C	CELLAR
C	CELLAR		



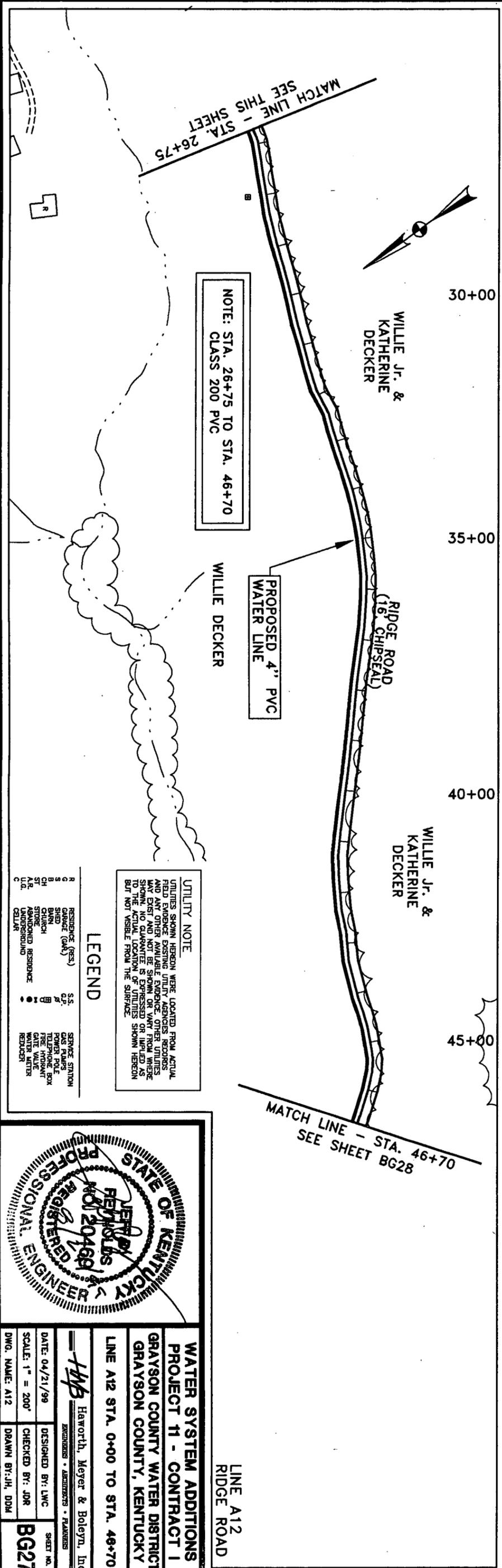
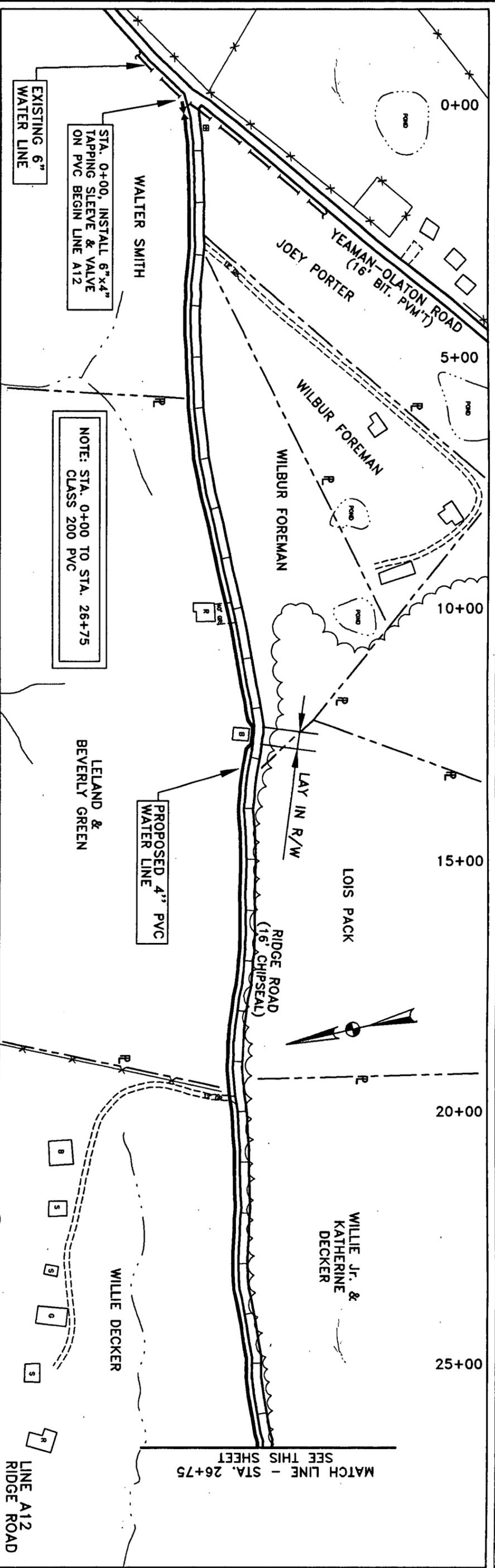
**WATER SYSTEM ADDITIONS**  
**PROJECT 11 - CONTRACT 1**  
**GRAYSON COUNTY WATER DISTRICT**  
**GRAYSON COUNTY, KENTUCKY**

LINE A23 9TA. 0+00 TO STA. 41+00

Haworth, Meyer & Boleyn, Inc.  
 ENGINEERS - ARCHITECTS - PLANNERS

DATE: 09/09/99  
 DESIGNED BY: LWC  
 SCALE: 1" = 200'  
 CHECKED BY: JDR  
 DWG. NAME: A23  
 DRAWN BY: DDW

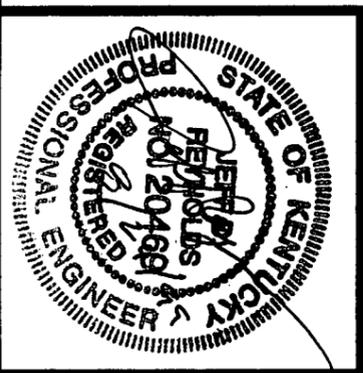
SHEET NO. **BG26**



**UTILITY NOTE**  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL FIELD EVIDENCE EXISTING UTILITY AGENCIES RECORDS AND ANY OTHER AVAILABLE EVIDENCE. OTHER UTILITIES MAY EXIST AND NOT BE SHOWN OR VARY FROM WHERE SHOWN. NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACCURACY OF UTILITIES SHOWN HEREON BUT NOT VISIBLE FROM THE SURFACE.

**LEGEND**

R	RESIDENCE (REAR)	S.S.	SERVICE STATION
S	RESIDENCE (SIDE)	g	POWER POLE
B	SHED	g	TELEPHONE BOX
CH	CHURCH	g	FIRE HYDRANT
AR	ABANDONED RESIDENCE	g	WATER TOWER
U.G.	UNDERGROUND	g	WATER REDUCER
C	CELLAR		



**WATER SYSTEM ADDITIONS**  
**PROJECT 11 - CONTRACT 1**  
 GRAYSON COUNTY WATER DISTRICT  
 GRAYSON COUNTY, KENTUCKY

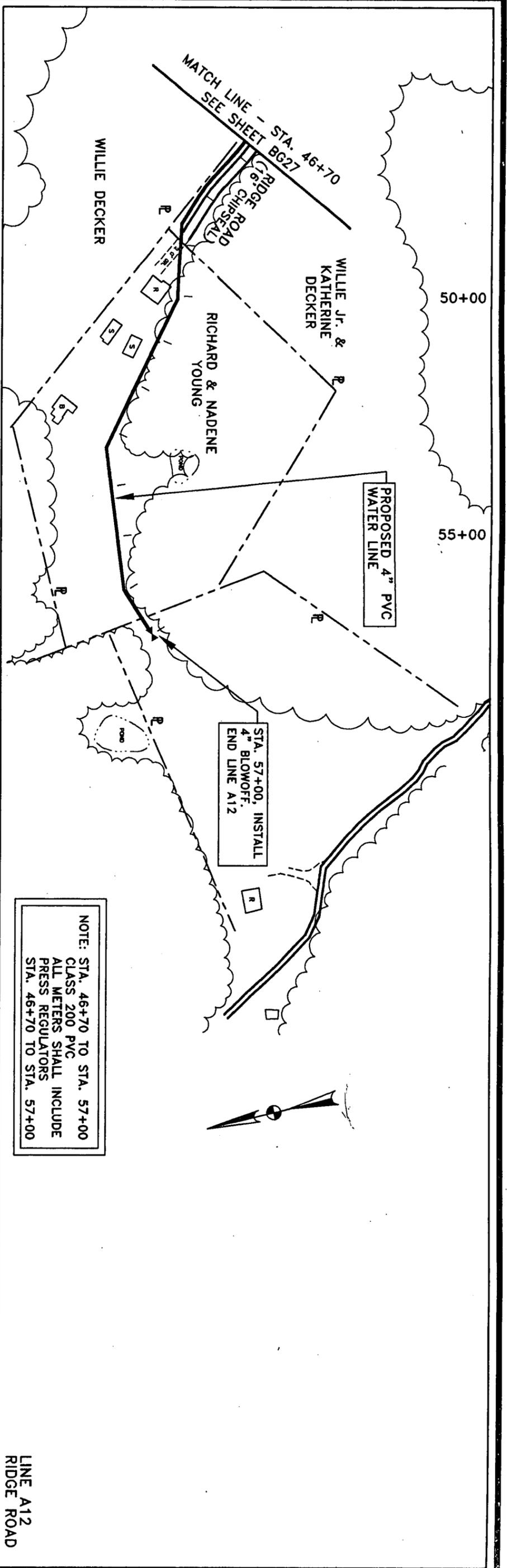
LINE A12 STA. 0+00 TO STA. 46+70

**HMB** Harwith, Meyer & Boleyn, Inc.  
 ENGINEERS • ARCHITECTS • PLANNERS

DATE: 04/21/99  
 SCALE: 1" = 200'  
 DWG. NAME: A12

DESIGNED BY: LWC  
 CHECKED BY: JDR  
 DRAWN BY: JH, DDM

SHEET NO. **BG27**



NOTE: STA. 46+70 TO STA. 57+00  
 CLASS 200 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 46+70 TO STA. 57+00

LINE A12  
 RIDGE ROAD

**UTILITY NOTE**  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL FIELD EVIDENCE EXISTING UTILITY AGENCIES RECORDS AND ANY OTHER AVAILABLE EVIDENCE. OTHER UTILITIES MAY EXIST AND NOT BE SHOWN OR VARY FROM WHERE SHOWN AND COMPANIES AS EXPRESSED OR IMPLIED AS TO THE ACCURACY OF THE UTILITIES SHOWN HEREON BUT NOT VISIBLE FROM THE SURFACE.

**LEGEND**

R	RESIDENCE (RES.)	S.S.	SERVICE STATION
C	GARAGE (GAR.)	g	POWER POLE
S	SHED	B	TELEPHONE BOX
B	BARN	●	FIRE HYDRANT
CH	CHURCH	○	WATER METER
SR	SEMI-ABANDONED RESIDENCE	○	WATER METER
A.R.	ABANDONED RESIDENCE	○	WATER METER
U.R.	UNDERGROUND	○	WATER METER
C	CELLAR	○	RENDERER



**WATER SYSTEM ADDITIONS**  
**PROJECT 11 - CONTRACT 1**  
 GRAYSON COUNTY WATER DISTRICT  
 GRAYSON COUNTY, KENTUCKY

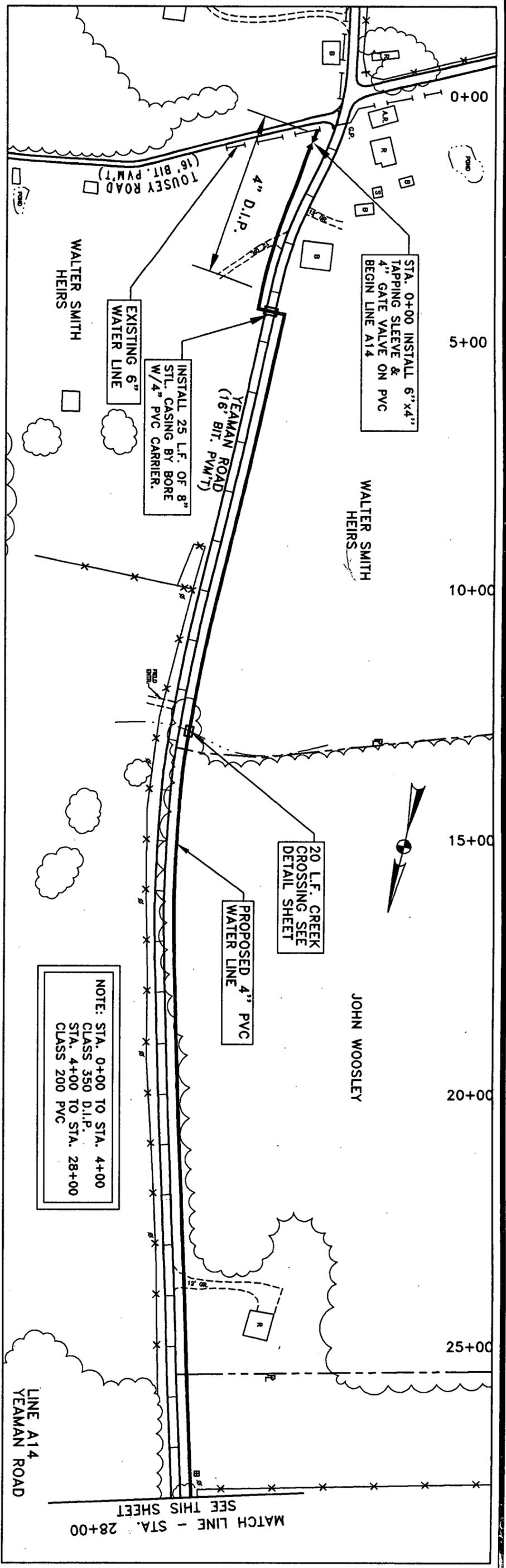
LINE A12 STA. 46+70 TO STA. 57+00

**HMB** Harwith, Meyer & Boley, Inc.  
 ENGINEERS • ARCHITECTS • PLANNERS

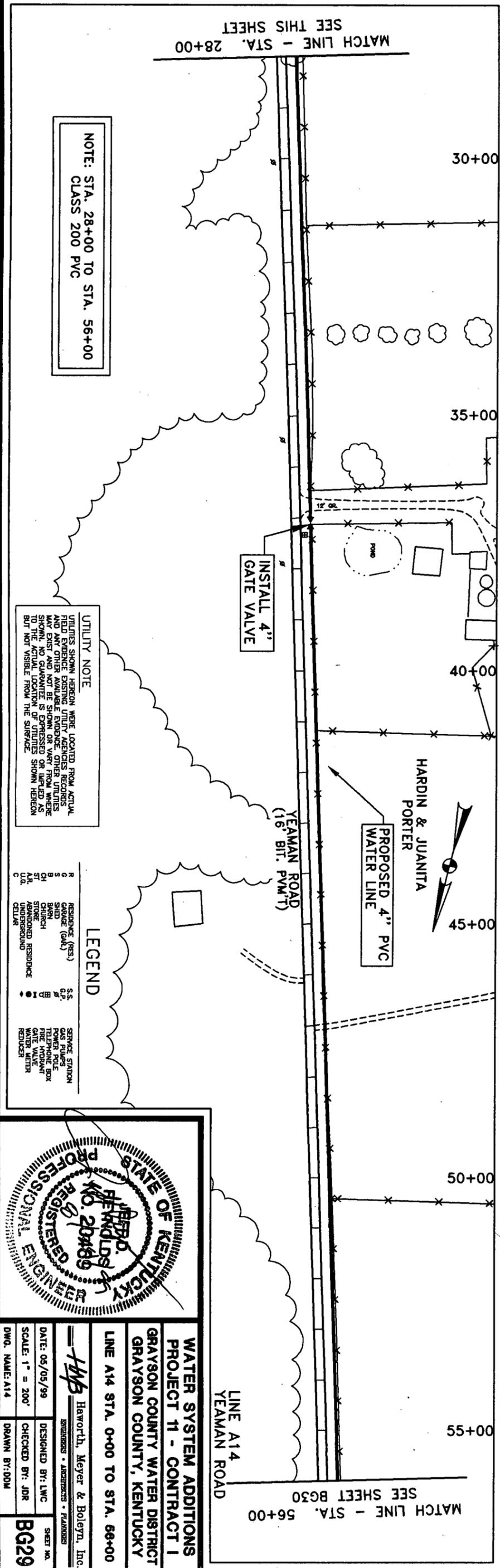
DATE: 04/21/99  
 SCALE: 1" = 200'  
 DWG. NAME: A12

DESIGNED BY: LWC  
 CHECKED BY: JDR  
 DRAWN BY: JH, DDM

SHEET NO.  
**BG28**



NOTE: STA. 0+00 TO STA. 4+00  
 CLASS 350 D.I.P.  
 STA. 4+00 TO STA. 28+00  
 CLASS 200 PVC



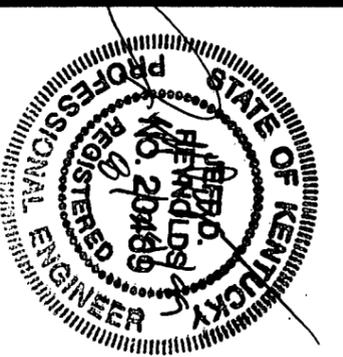
MATCH LINE - STA. 56+00  
 SEE SHEET BG30

NOTE: STA. 28+00 TO STA. 56+00  
 CLASS 200 PVC

UTILITY NOTE  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL FIELD EVIDENCE EXISTING UTILITY AGENCIES RECORDS AND ANY OTHER AVAILABLE EVIDENCE. OTHER UTILITIES MAY EXIST AND NOT BE SHOWN OR VARY FROM WHERE SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF UTILITIES SHOWN HEREON BUT NOT VISIBLE FROM THE SURFACE.

LEGEND

R	RESIDENCE (RES.)	S.S.	SERVICE STATION
G	GARAGE (GAR.)	G.P.	GAS PIPES
S	SHED	B	POWER POLE
BH	BURNING	ST	TELEPHONE BOX
ST	STONE	AB	ABANDONED RESIDENCE
AR	ABANDONED RESIDENCE	U.G.	UNDERGROUND
U.G.	UNDERGROUND	CEL	CELL



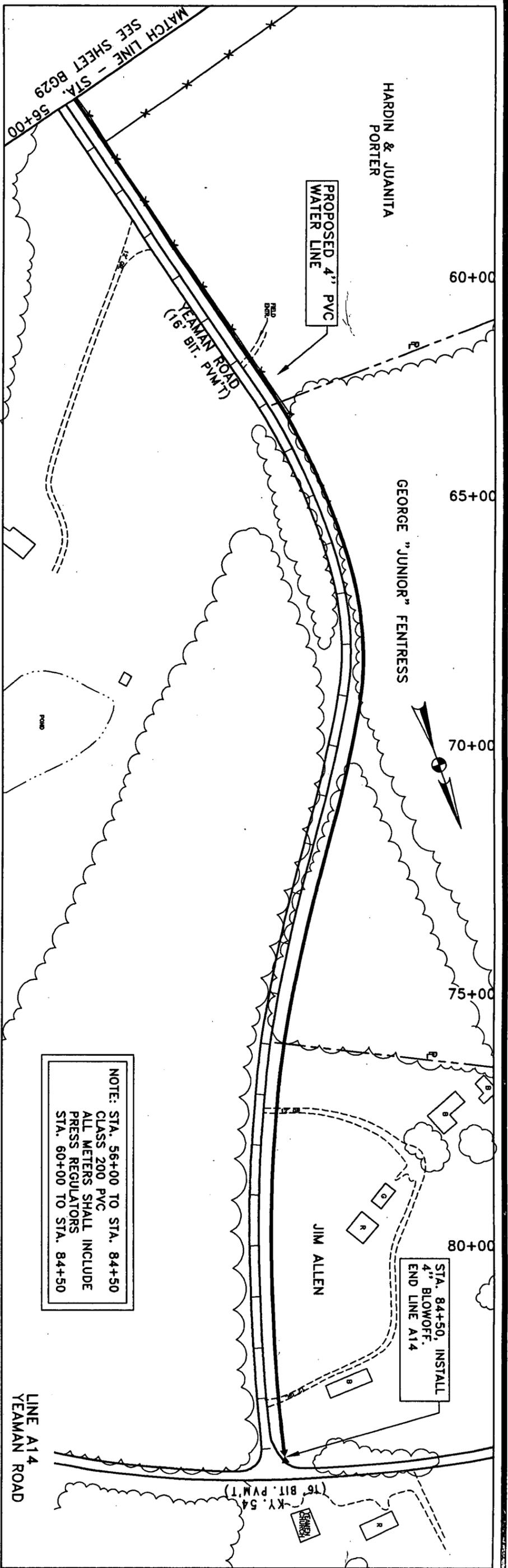
**WATER SYSTEM ADDITIONS**  
**PROJECT 11 - CONTRACT 1**  
 GRAYSON COUNTY WATER DISTRICT  
 GRAYSON COUNTY, KENTUCKY

LINE A14 STA. 0+00 TO STA. 56+00

Haworth, Meyer & Boleyn, Inc.  
 ENGINEERS & ARCHITECTS - PLANNERS

DATE: 05/05/99  
 SCALE: 1" = 200'  
 DWG. NAME: A14

DESIGNED BY: LMC  
 CHECKED BY: JDR  
 SHEET NO. **BG29**  
 DRAWN BY: DDM

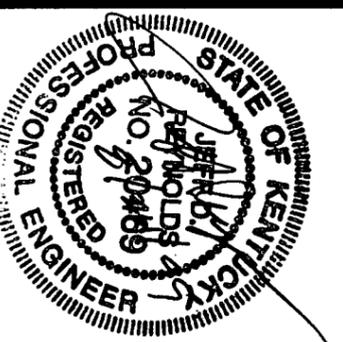


NOTE: STA. 56+00 TO STA. 84+50  
 CLASS 200 PVC  
 ALL METERS SHALL INCLUDE  
 PRESS REGULATORS  
 STA. 60+00 TO STA. 84+50

**UTILITY NOTE**  
 UTILITIES SHOWN HEREON WERE LOCATED FROM ACTUAL FIELD EVIDENCE EXISTING UTILITY AGENCIES RECORDS AND ALL OTHER AVAILABLE EVIDENCE. OTHER UTILITIES SHOWN ARE ASSUMED TO BE IN PLACE. THE LOCATION OF UTILITIES SHOWN, NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACTUAL LOCATION OF UTILITIES SHOWN HEREON BUT NOT VISIBLE FROM THE SURFACE.

**LEGEND**

R	RESIDENCE (RES.)	S.S.	SERVICE STATION
G	GARAGE (GAR.)	C.P.	GAS PIPES
S	SHED	P	POWER POLE
CH	CHURCH	TR	TELEPHONE BOX
ST	STORE	TV	TELEVISION ANTENNA
AR	ABANDONED RESIDENCE	WV	WATER VALVE
UA	UNDEVELOPED	WR	WATER REDUCER
U	UTILITY		



**WATER SYSTEM ADDITIONS**  
**PROJECT 11 - CONTRACT 1**  
**GRAYSON COUNTY WATER DISTRICT**  
**GRAYSON COUNTY, KENTUCKY**

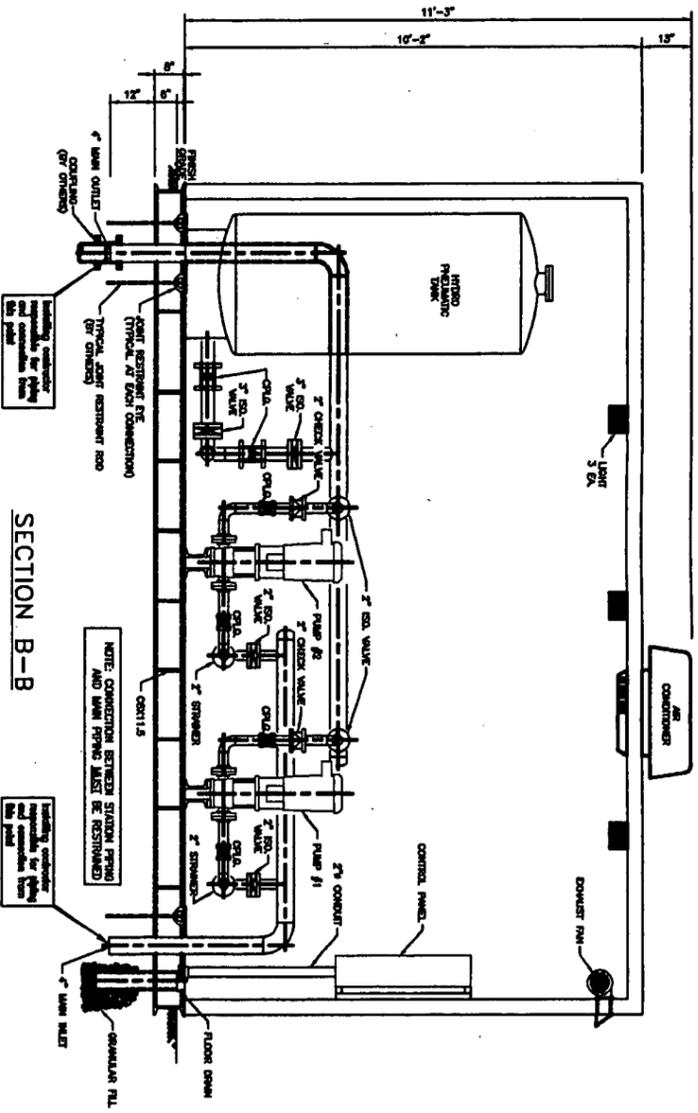
LINE A14 STA. 88+00 TO STA. 84+50

**Haworth, Meyer & Boleyn, Inc.**  
 ENGINEERS • ARCHITECTS • PLANNERS

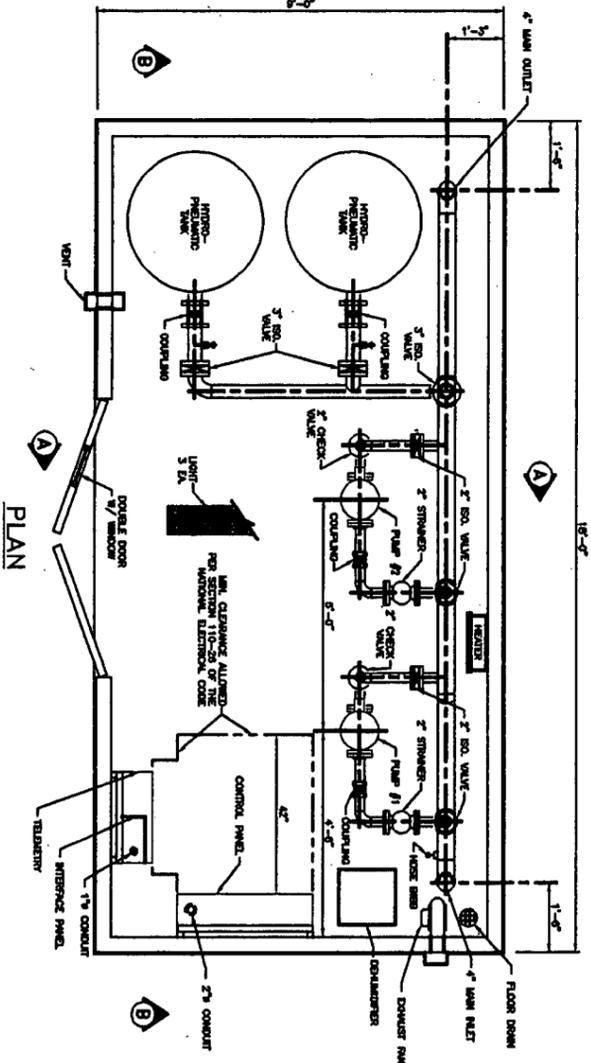
DATE: 05/05/99  
 SCALE: 1" = 200'  
 DWG. NAME: A14

DESIGNED BY: LWC  
 CHECKED BY: JDR  
 DRAWN BY: DDW

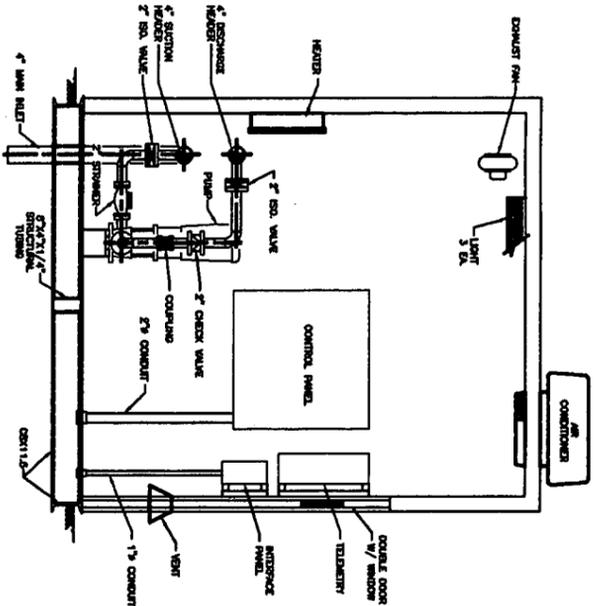
SHEET NO. **BG30**



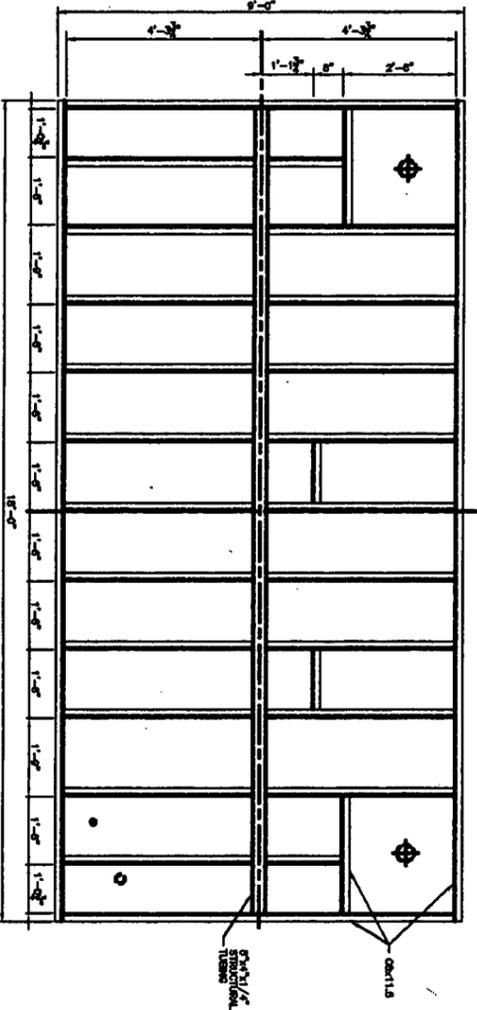
SECTION B-B



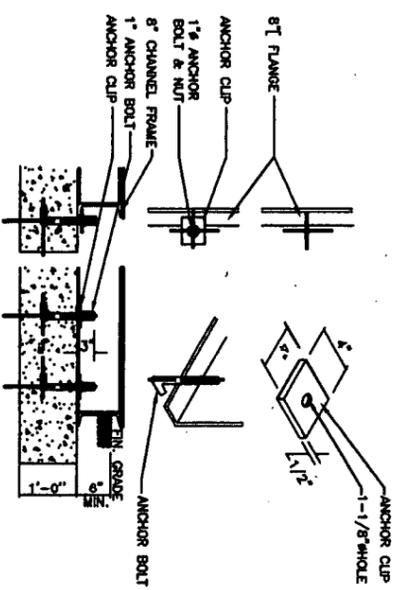
PLAN



SECTION A-A



SKID PLAN



TYPICAL ANCHOR DETAIL

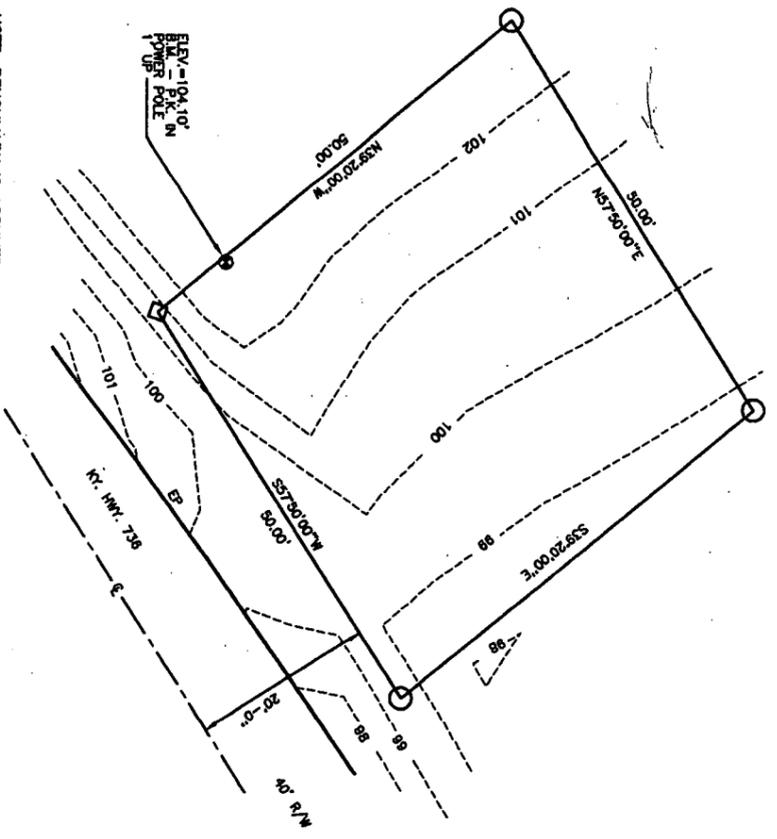
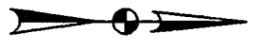
NOTES: ANCHOR CLIPS FURNISHED BY E.F.I.  
ANCHOR BOLTS AND NUTS BY CONTRACTOR.  
ALL ANCHOR BOLTS AND NUTS SHALL BE 316 STAINLESS STEEL.  
FLOOR SLAB SHALL INCLUDE #5 REBAR 12\"/>

**DESIGN CRITERIA**

Combine LOCAL PRESSURE WATER TREATMENT  
Power Service: 230 Volts, 1 Phase, 60 Cycle  
PUMP DATA  
Type: VERTICAL MULTI-STAGE CENTRIFUGAL  
Capacity: 28 GPM AT 120 FEET T.D.H.  
Size: 2' x 2'  
Motor: 5 HP., 5000 R.P.M.



<b>WATER SYSTEM ADDITIONS</b>	
<b>PROJECT 11 - CONTRACT #1</b>	
<b>GRAYSON COUNTY WATER DISTRICT</b>	
<b>GRAYSON COUNTY, KENTUCKY</b>	
<b>LONE HILL PUMP STATION</b>	
HMB Haworth, Meyer & Boleyn, Inc. ENGINEERS - ARCHITECTS - PLANNERS	
DATE: 7/22/99	DESIGNED BY: LWC
SCALE: 1/4"=1'-0"	CHECKED BY: JEM
DWG. NAME:	DRAWN BY: DOW/GAR
SHEET NO. <b>BG31</b>	

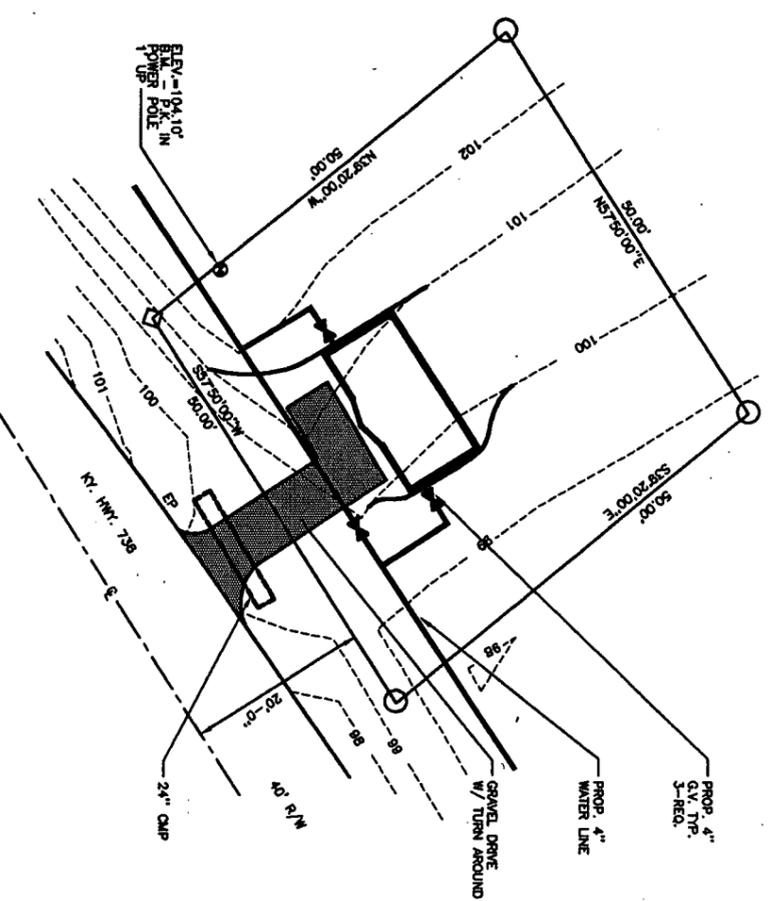


NOTE: BENCHMARK IS ASSUMED ELEVATION FOR REFERENCE ONLY.

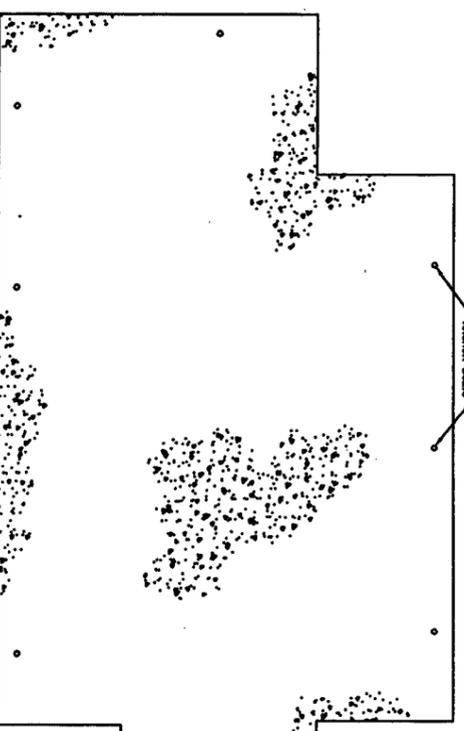
EXISTING PUMP STATION SITE  
SCALE: 1"=20'-0"

SURVEY PREPARED BY:  
CLEMENTS LAND SURVEYING  
100 EAST UNION STREET  
LEITCHFIELD, KY 42753  
PH: 502-259-5855 OR 259-8674 (FAX)

**LEGEND**  
 --- EXISTING CONTOUR  
 ——— PROPOSED CONTOUR  
 ——— WATER LINE  
 — GATE VALVE



PROPOSED PUMP STATION SITE  
SCALE: 1"=20'-0"

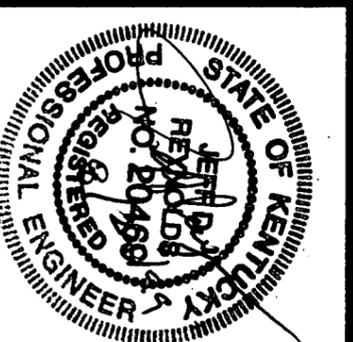


TYPICAL FOUNDATION LAYOUT  
SCALE: 1/4"=1'-0"

NOTES: FOUNDATION DIMENSIONS AND ANCHOR BOLT SPACING AND DIMENSIONS SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY ENGINEER

NOTE: FOUNDATION CURVE MUST BE PROVIDED TO ACCOMMODATE ANCHOR SPACE TO CONNECT ELECTRICAL (REINFORCING CONCRETE)

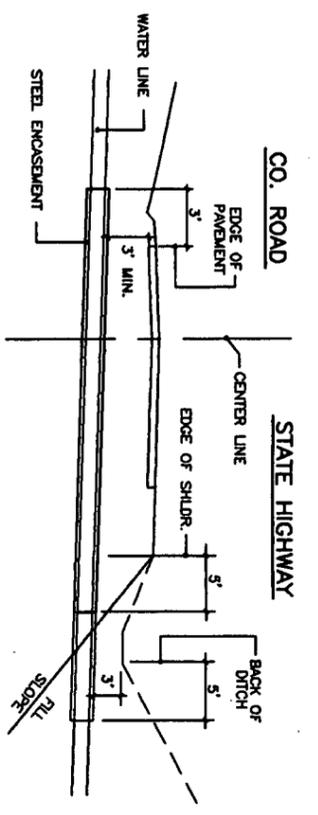
NOTE: FOUNDATION CURVE MUST BE PROVIDED TO ACCOMMODATE ANCHOR SPACE TO CONNECT MAIN PIPING



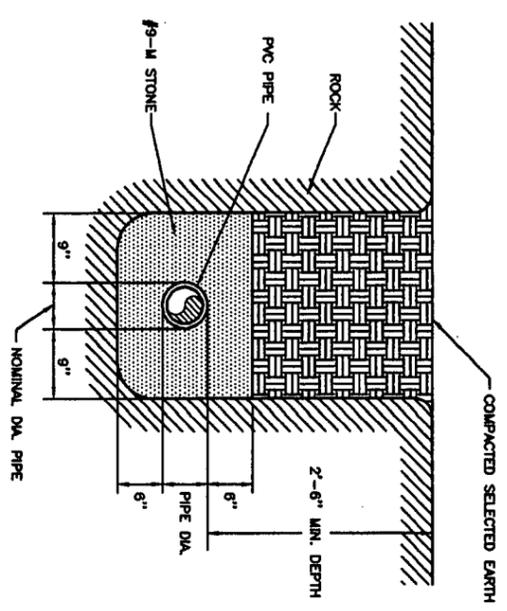
**WATER SYSTEM ADDITIONS  
PROJECT #1 - CONTRACT #1  
GRAYSON COUNTY WATER DISTRICT  
GRAYSON COUNTY, KENTUCKY**

**LONE HILL PUMP STATION**

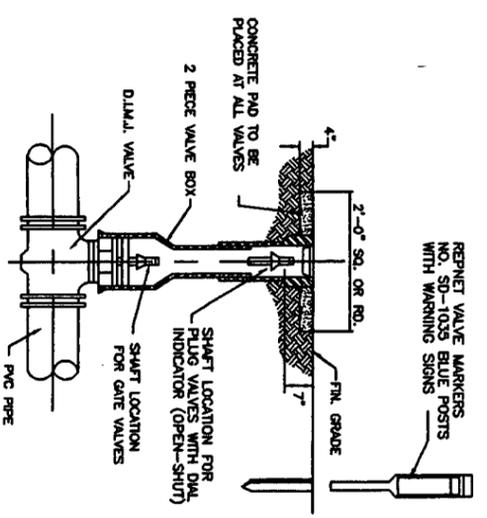
Haworth, Meyer & Boleyn, Inc.	
ENGINEERS • ARCHITECTS • PLANNERS	
DESIGNED BY: LWC	SHEET NO.
CHECKED BY: JEM	<b>BG32</b>
DWG. NAME:	DRAWN BY: DDM, GAR
DATE: 7/22/99	SCALE: AS NOTED



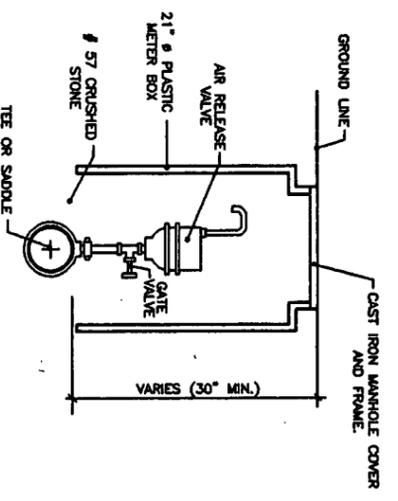
**DETAIL - TYPICAL ROAD CROSSING**  
N.T.S.



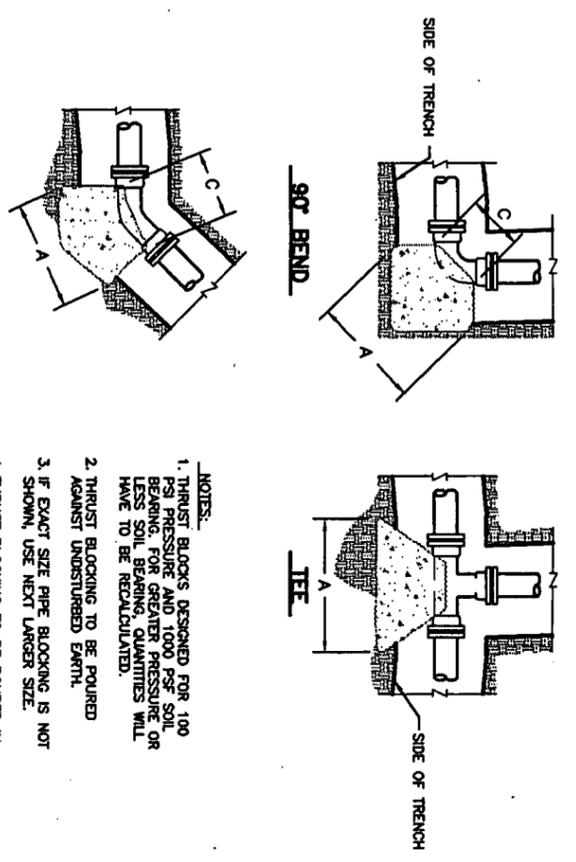
**DETAIL - TYPICAL EARTH OR STONE ENVELOPE FOR PIPE LAD IN ROCK**  
N.T.S.



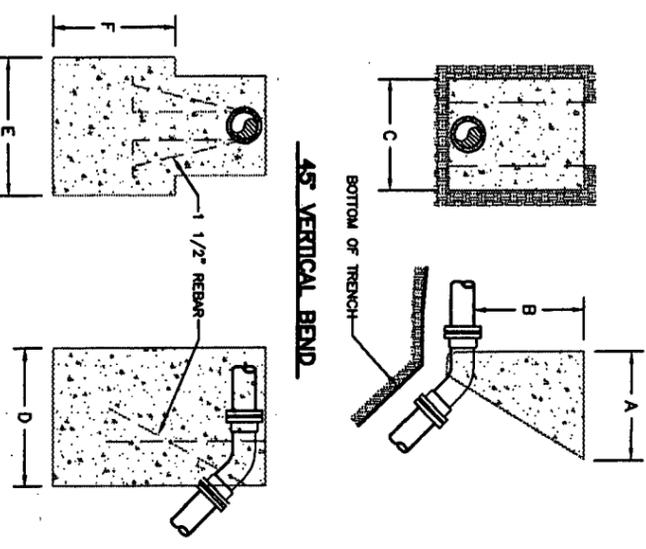
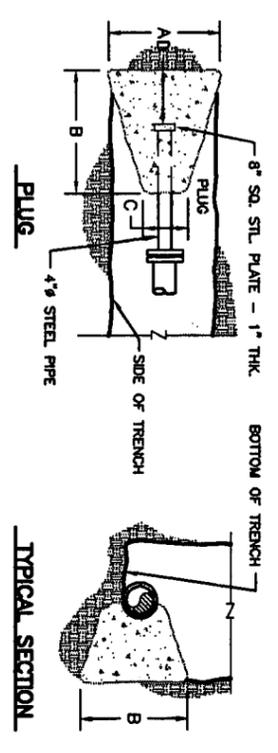
**DETAIL - TYPICAL VALVE SETTING**  
N.T.S.



**DETAIL - AUTOMATIC AIR RELEASE VALVE**  
N.T.S.



- NOTES:**
1. THRUST BLOCKS DESIGNED FOR 100 PSF PRESSURE AND 1000 PSF SOIL BEARING. FOR GREATER PRESSURES OR LESS SOIL BEARING, QUANTITIES WILL HAVE TO BE RECALCULATED.
  2. THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
  3. IF EXACT SIZE PIPE BLOCKING IS NOT SHOWN, USE NEXT LARGER SIZE.
  4. THRUST BLOCKING TO BE POURED IN PLACE CLASS B CONC.



**DETAIL - THRUST BLOCKING**  
N.T.S.

**90° BEND**

SIZE	24"	20"	18"	16"	12"	10"	8"	6"	4"	2"
A	88	80	72	64	50	40	33	26	16	16
B	88	80	72	64	50	40	33	24	16	16
C	45	38	32	30	16	15	12	12	9	9
D	48	40	36	32	25	20	16	12	8	8

**45° BEND**

SIZE	24"	20"	18"	16"	12"	10"	8"	6"	4"	2"
A	72	60	54	48	37	31	24	18	12	12
B	72	60	54	48	37	31	24	18	12	12
C	22	20	16	16	14	12	12	12	8	8
D	32	28	25	22	18	15	12	9	6	6

**45° VERTICAL BEND**

SIZE	24"	20"	18"	16"	12"	10"	8"	6"	4"	2"
A	72	60	60	45	36	36	36	36	24	24
B	60	48	48	45	36	36	36	36	24	24
C	96	84	84	72	60	60	60	60	48	48
D	84	72	72	60	48	48	48	48	36	36
E	84	72	72	60	48	48	48	48	36	36
F	84	72	72	60	48	48	48	48	36	36

**22 1/2° BEND**

SIZE	24"	20"	18"	16"	12"	10"	8"	6"	4"	2"
A	50	42	36	34	26	23	18	13	9	9
B	50	42	36	34	26	23	18	13	9	9
C	22	20	16	16	14	14	12	10	8	8
D	26	22	18	16	13	11	9	6	4	4

**11 1/4° BEND**

SIZE	24"	20"	18"	16"	12"	10"	8"	6"	4"	2"
A	36	30	27	24	18	16	13	11	9	9
B	36	30	27	24	18	16	13	11	9	9
C	22	20	16	16	14	14	12	10	8	8
D	22	18	14	12	9	8	6	5	4	4

**PLUG**

SIZE	24"	20"	18"	16"	12"	10"	8"	6"	4"	2"
A	80	66	60	54	52	43	34	26	26	26
B	80	66	60	54	52	43	34	26	26	26
C	12	12	12	12	12	12	12	12	12	12
D	72	60	54	44	32	22	15	11	11	11

**TEE**

SIZE	24"	20"	18"	16"	12"	10"	8"	6"	4"	2"
A	80	66	60	54	52	42	28	43	26	26
B	80	66	60	54	52	43	26	43	26	26
C	45	36	32	30	12	12	12	12	12	12
D	48	40	36	30	26	21	13	13	13	13

DIMENSIONS ARE IN INCHES

**STATE OF KENTUCKY**  
**REGISTERED PROFESSIONAL ENGINEER**  
**JERRY D. REMY**  
 No. 20469

**WATER SYSTEM ADDITIONS**  
**PROJECT #1 - CONTRACT #1**  
**GRAYSON COUNTY WATER DISTRICT**  
**GRAYSON COUNTY, KENTUCKY**

**STANDARD DETAILS**

HMB  
 Haworth, Meyer & Boley, Inc.  
 ENGINEERS • ARCHITECTS • PLANNERS

DATE: MAY 1999  
 SCALE: N.T.S.  
 DWG. NAME: DETAIL

DESIGNED BY: LWC  
 CHECKED BY: JDR  
 DRAWN BY: GAR

SHEET NO. **WD**